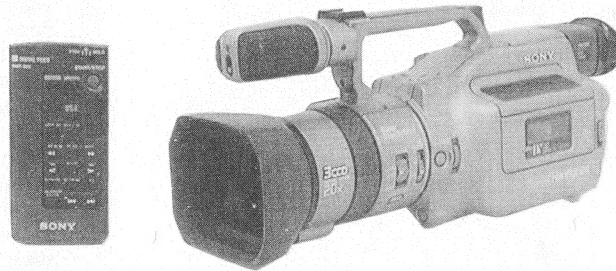


DCR-VX1000/VX1000E

RMT-803

SERVICE MANUAL

US Model
Canadian Model
DCR-VX1000
AEP Model
UK Model
DCR-VX1000E



Digital
Handycam

D MECHANISM

For MECHANISM ADJUSTMENTS, refer to the
"DV MECHANICAL ADJUSTMENT MANUAL I"
(9-973-815-11).

SPECIFICATIONS

Video Camera Recorder

System

Video recording system

Two rotary heads, Helical
scanning system

Audio recording system

Rotary heads, PCM system

Video signal

NTSC color, EIA standards (VX1000)

PAL colour, CCIR standards (VX1000E)

Usable cassette

mini DV cassette with logo
printed

Tape speed

Approx. $\frac{3}{4}$ inches (18.81 mm)/
s (VX1000)

Approx. 18.83 mm ($\frac{3}{4}$ inches)/
s (VX1000E)

Recording time

1 hour (DVM60ME)

Playback time

1 hour (DVM60ME)

Fast forward/rewind time

Approx. 2 min. 30 s
(DVM60ME)

Image device

3CCD (Charge Coupled
Device $\frac{1}{3}$ ")

Viewfinder

Electric viewfinder (colour)

Lens

10x (optical)

$f = \frac{1}{4}$ to $2\frac{5}{16}$ inches (5.9 to 59
mm)

$1\frac{5}{8}$ to $16\frac{9}{16}$ inches (42 to 420
mm) when converted into a 35-
mm still camera

$F = 1.6$ to 2.1

Filter diameter $2\frac{1}{8}$ inches (52
mm)

TTL autofocus system

Inner focus wide macro system

Color temperature

Auto/Indoors (3200K)/

Outdoors (5800K)

Minimum illumination

8 lx (F1.6) (VX1000)

4 lx (F1.6) (VX1000E)

Illumination range

8 lx to 100,000 lx (VX1000)

4 lx to 100,000 lx (VX1000E)

(recommended more than 100
lx)

Shutter speed control

$\frac{1}{4}$ to $\frac{1}{10000}$

Input and output connectors

S video output

4-pin mini DIN

Luminance signal: 1 Vp-p, 75 Ω ,
unbalanced, sync negative

Chrominance signal: 0.286 Vp-
p, 75 Ω , unbalanced

Video output

RCA pin-jack, 1 Vp-p, 75 Ω ,
unbalanced, sync negative

Audio output

RCA pin-jacks (2: stereo L and
R) 327 mV, (at load impedance
47 k Ω) impedance less than 2.2
k Ω

— Continued on next page —

Mini DV Digital
Video
Cassette

DIGITAL VIDEO CAMERA RECORDER

SONY®



RFU DC OUT

Special mini-jack, DC 5 V

Headphones jack

Stereomini-jack (ø 3.5 mm)

LANC control jack

Stereomini-mini-jack (ø 2.5 mm)

MIC jack

Stereomini-jack, 0.388 mV low impedance with 2.5 – 3 V

DC output, impedance 6.8 kΩ (ø 3.5 mm)

DC input

4-pin connector

DV input/output

4-pin special connector

General**Power requirement**

On battery mounting surface

7.2 V (battery pack)

6.5 V (AC power adaptor)

Average power consumption

9.5 W (camera recording)

Installation

Vertically, horizontally

Operating temperature

32 °F to 104 °F (0 °C to 40 °C)

Storage temperature

–4 °F to 140 °F (–20 °C to 60 °C)

Dimensions

Approx. 4.3 × 5.7 × 13.0 inches

(w/h/d) (110 × 144 × 329 mm)

Mass

Approx. 3 lb 1 oz (1.4 kg) excluding the battery pack, cassette

Approx. 3 lb 6 oz (1.6 kg) including the battery pack

NP-720, lithium battery
CR2025, cassette DVM60, and shoulder strap

Microphone

Electret condenser microphone, stereo type

AC Power Adaptor**Power requirements**

100 – 240 V AC, 50/60 Hz

Power consumption

22 W

Output voltage

DC OUT: 6.5 V, 2 A in operating mode

Battery charge terminal: 8.4 V, 1.4 A in charging mode

Application

Sony battery packs NP-720 lithium ion type

Operating temperature/**Storage temperature**

Same specifications as video camera recorder.

Dimensions

Approx. 2¹/₅ × 1³/₄ × 3¹/₄ inches (w/h/d) (72 × 44 × 96 mm) including projecting parts and controls

Mass

Approx. 10.6 oz (300 g)



Design and specification are subject to change without notice.

SAFETY CHECK-OUT


After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the B+ voltage to see it is at the values specified.
6. Flexible Circuit board Repairing
 - Keep the temperature of the soldering iron around 270°C during repairing.
 - Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
 - Be careful not to apply force on the conductor when soldering or unsoldering.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE  SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SERVICE NOTE

Ejecting with Cabinet (R) Assembly Removed

- Supply the power with the cabinet (R) assembly removed according to "2. Disassembly" (but the flexible board connecting the cabinet (R) assembly and main unit should remain connected).

- **Ejecting**

Open the cassette lid by operating the fixed shaft bracket assembly, turn off the CC DOWN SW, and press the eject knob again.

- **Loading**

Close the cassette lid.

(Turn on the CC DOWN SW.)

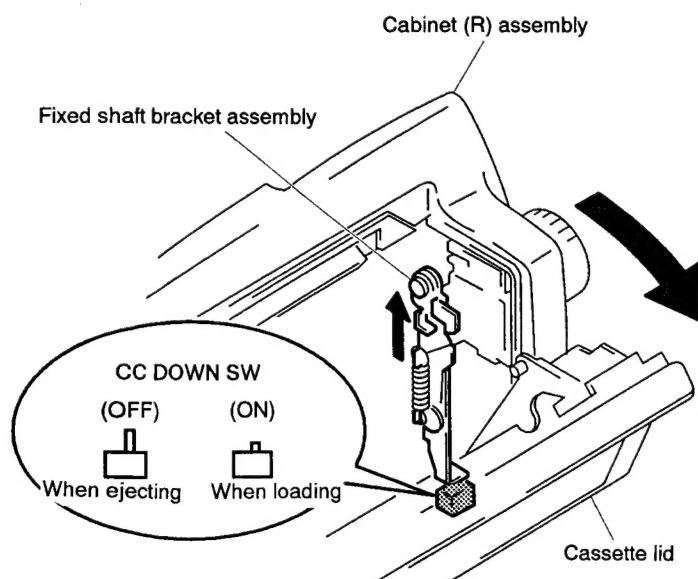


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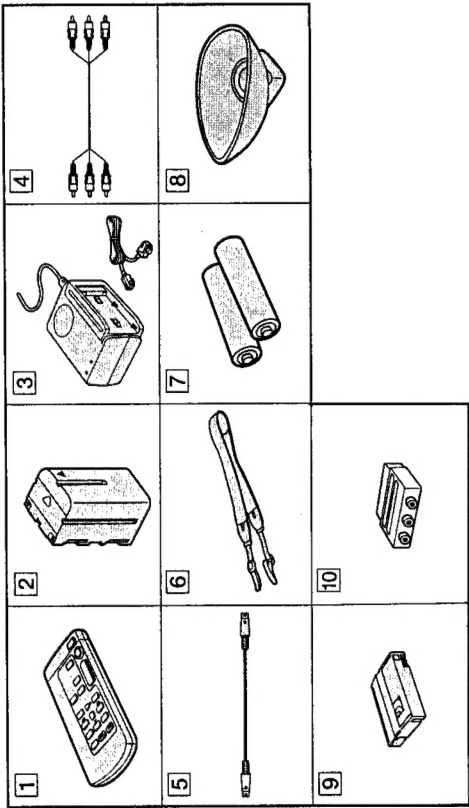
There is the color reproduction standard frame at the back of the book.

SECTION 1
GENERAL

This section is extracted
from instruction manual.

Checking Supplied Accessories

Check that the following accessories are supplied with your camcorder.



- 1 Wireless Remote Commander (1)
- 2 NP-720 Battery Pack (1)
- 3 AC-V515 AC power adaptor and DK-715 connecting cord (1)
- 4 A/V connecting cable (1)
- 5 S video connecting cable (1)
- 6 Shoulder strap (1)
- 7 Re (size AA) batteries for Remote Commander (2)
- 8 Eyecup (1)
- 9 Mini DV cassette (1)
- 10 21-pin adaptor (1) (VX1000E)

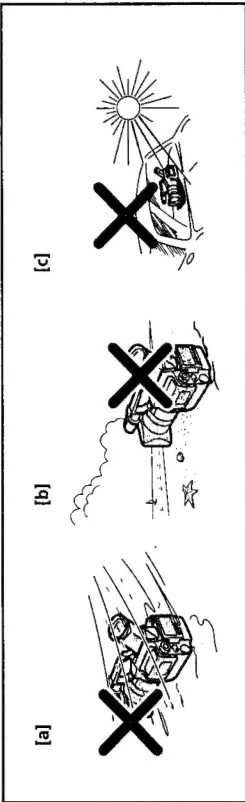
Before You Begin

Notes and Precautions

Note on TV Color Systems
TV color systems differ from country to country. To view your recordings on a TV, you need an NTSC system based TV. Please check the list to see the TV color system of your country (p. 57).

Precaution on Copyright
Television programs, films, video tapes, and other materials may be copyrighted. Unauthorized recording of such materials may be contrary to the provision of the copyright laws.

- Precautions on Camcorder Care**
- Do not let the camcorder get wet. Keep the camcorder from rain or sea water. It may cause a malfunction and sometimes the malfunction cannot be repaired. [a]
 - Do not let sand get into the camcorder. When you use the camcorder on a sandy beach or dusty place, protect it from the sand or dust. Sand or dust may cause the unit to malfunction and sometimes the malfunction cannot be repaired. [b]
 - Never leave the camcorder under temperatures above 140 °F (60° C), such as in a car parked in the sun or under direct sunlight. [c]



Contents of the recording cannot be compensated if recording or playback is not made due to a malfunction of the camcorder, video tape, etc.

See "Precautions" as well (p. 66).

Before You Begin

Getting Started

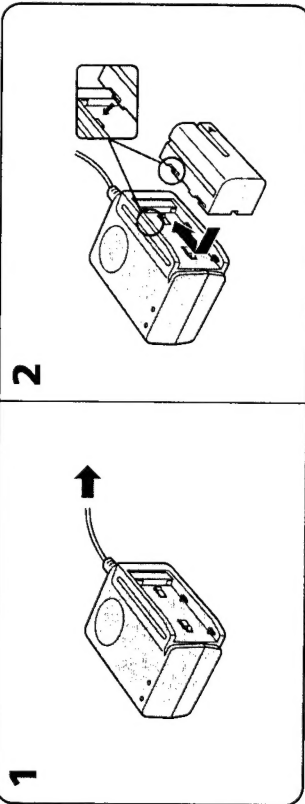
Charging and Inserting the Battery Pack

Before using your camcorder, you first need to charge and install the battery pack. To charge the battery pack, use the supplied AC power adaptor.

Charging the Battery Pack

Charge the battery pack on a flat place without vibration.

- (1) Connect the AC power adaptor to a wall outlet.
- (2) Align the surface of the battery pack indicated by the ► mark with the edge of the terminal shutter of the AC power adaptor. Then fit and slide the battery pack in the direction of the arrow. The CHARGE lamp (orange) lights up. Charging begins. When charging is completed, the CHARGE lamp goes out. Unplug the unit from the wall outlet, then remove the battery pack and install it on the camcorder.



Charging Time

Battery Pack	Charging time*
NP-720 (supplied)	190

* Approximate minutes to charge an empty pack using the supplied AC power adaptor (Lower temperatures require a longer charging time.)

Battery Life

Battery Pack	Typical recording time*	Continuous using time**
NP-720 (supplied)	40	80

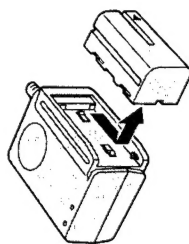
* Approximate minutes when recording while you repeat recording start/stop, zooming and turning the power on/off. The actual battery life may be shorter.

** Approximate continuous recording and playing back time indoors.

Getting Started

Removing the Battery Pack

Slide the battery pack in the direction of the arrow.

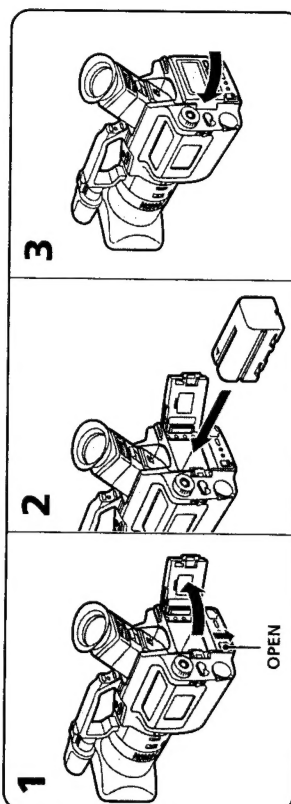


Notes on charging the battery pack

- The POWER lamp will remain lit for a while even if the battery pack is removed and the power cord is unplugged after charging the battery pack. This is normal.
- If the POWER lamp does not light, disconnect the AC power cord. After about one minute, reconnect the AC power cord again.
- You cannot operate the camcorder using the AC power adaptor while charging the battery pack.
- When a fully charged battery pack is installed, the CHARGE lamps will light once, then go out.

Inserting the Battery Pack

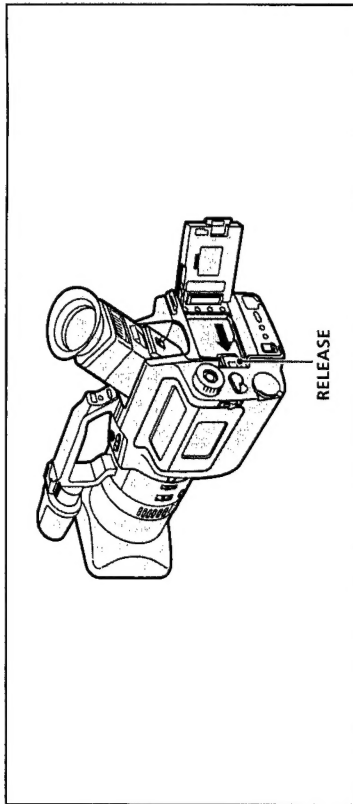
- (1) Slide OPEN and open the battery cover.
- (2) Insert the battery pack until it is hooked by the RELEASE knob.
- (3) Close the cover.



Charging and Inserting the Battery Pack

To Remove the Battery Pack

Slide the RELEASE knob leftward.



Note on battery pack

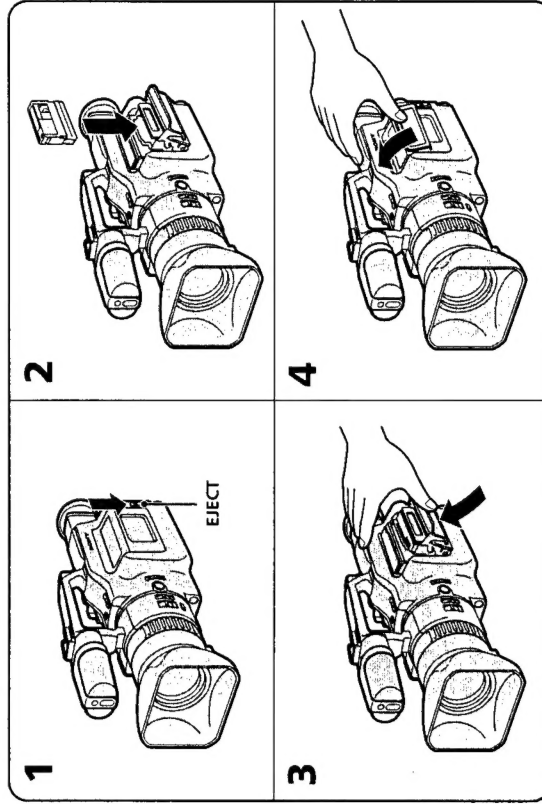
You cannot use NP-520 or NP-500H battery pack.

Inserting a Cassette

You can use mini DV cassette with ^{Mini} DV logo* only. Make sure that a power source is inserted.

- (1) Slide EJECT. The cassette compartment automatically lifts up and opens.
- (2) Insert a cassette (supplied) with the window facing out.
- (3) Press the outside of the cassette compartment cover to close the compartment. The cassette compartment automatically retracts.
- (4) After the cassette compartment cover has retracted, press the upper cassette compartment cover until it clicks.



* CII and ^{Mini} DV are trademarks.

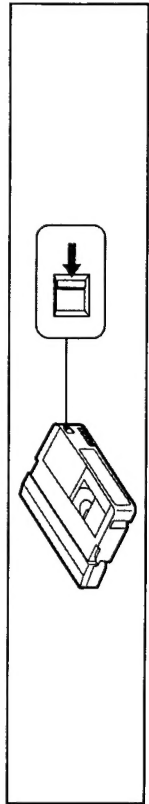


To Eject the Cassette

Slide EJECT. After the cassette compartment opens, take out the cassette. You cannot eject the cassette while C MEMORY appears in the viewfinder because the camcorder is still writing information to the mini DV cassette-mounted cassette memory (p. 82). In this case, the cassette compartment automatically lifts up and opens after C MEMORY disappears.


To Prevent Accidental Erasure

Slide and open the tab on the cassette to expose the red mark. If you try to record with the red mark exposed, the  and  indicators flash in the viewfinder, and you cannot record on the tape. To rerecord on this tape, slide and close the tab to cover the red mark.

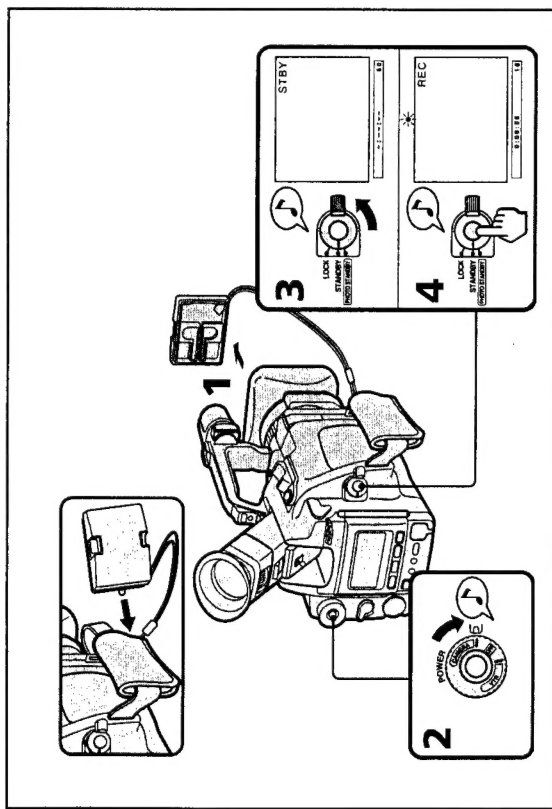


Basic Operations

Camera Recording

Make sure that a power source and a cassette are inserted. You can hear the beep sound, indicated with  in the illustrations, which confirms your operation. Before you record one-time events, you may want to make a trial recording to make sure that you are using the camcorder correctly.

- (1) Remove the hood cap, and attach it to the grip strap.
- (2) While pressing the centre button on the POWER switch, set it to CAMERA.
- (3) Turn STANDBY up.
- (4) Press START/STOP. The camcorder starts recording. The "REC" indicator appears in the viewfinder, and the red lamps on the front and back of the camcorder and in the viewfinder light.



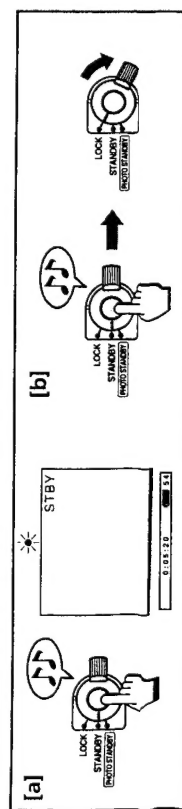
When ND ON flashes in the viewfinder
Set ND FILTER to ON.

To Stop Recording Momentarily [a]

Press START/STOP again. The "STBY" indicator appears in the viewfinder (Standby mode).

To Finish Recording [b]

Press START/STOP to stop recording. Turn the POWER switch to OFF. Then, eject the cassette and battery (p. 8, 9).



Basic Operations

Note on Standby mode

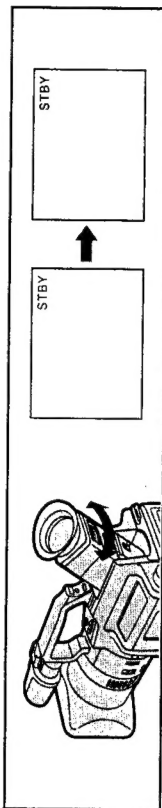
If you leave the camcorder for 5 minutes or more with a cassette inserted in Standby mode, the camcorder goes off automatically. This prevents wearing down the battery and wearing out the tape. To resume Standby mode, turn the POWER switch to OFF once and then to CAMERA. To start recording, press START/STOP.

Notes on the time code

- The time code indicates the recording or playback time, "00:00:00" (hours : minutes : seconds) in the viewfinder and "00:00:00" (hours : minutes : seconds : frames) on the TV screen. This camcorder uses the drop frame mode (p. 83).
- Be sure not make a blank portion when recording, because the time code will start from "00:00:00" again. You cannot rewrite the time code on the tape if there is a blank portion between pictures.

To Focus the Viewfinder Lens

If the viewfinder is not in focus at all or when you use the camcorder after someone else has used it, focus the viewfinder lens. Turn the viewfinder lens adjustment ring so that the indicators in the viewfinder come into sharp focus.



When the shooting condition is too bright


Use the supplied large eyecup. Fit it onto the camcorder by stretching the corners a little. [a]

If you wear glasses or you cannot view the corners

Fold back the eyecup to see better. [b]



Note on beep sound

As indicated with  in the illustrations, a beep sounds when you turn the power on or when you start recording and two beeps sound when you stop recording, confirming the operation. Several beeps also sound as a warning of any unusual condition of the camcorder (p. 81). Note that the beep sound is not recorded on the tape. If you do not want to hear the beep sound, set the BEEP to OFF in the menu system (p. 20).

To record through an external microphone

Connect a microphone to the MIC jack. In this case, sound from the built-in microphone will not be recorded. If no cassette is inserted while using a monaural microphone, you cannot monitor the left side sound from the headphones jack or audio output jack.

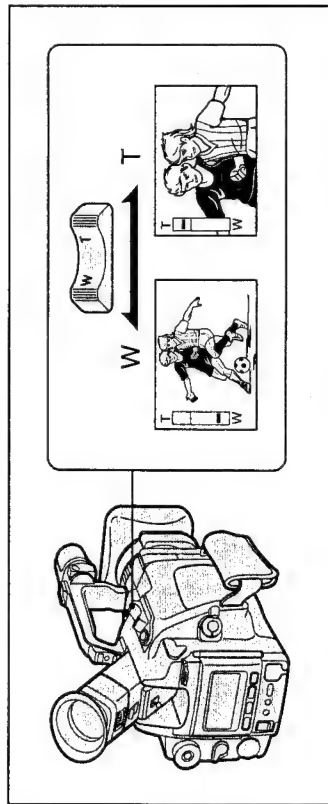
Note on color viewfinder

The color viewfinder employs an LCD screen made with high-precision technology. However, black points or bright points of light (red, blue or green) may appear constantly on the color viewfinder screen. These points are not recorded on the tape. This is not a malfunction. (Effective dots: more than 99.99%)

Camera Recording

Using the Zoom Feature

Zooming is a recording technique that lets you change the size of the subject in the scene. For more professional-looking recordings, use the zoom sparingly.
T side: for telephoto (subject appears closer)
W side: for wide-angle (subject appears farther away)



Zooming Speed

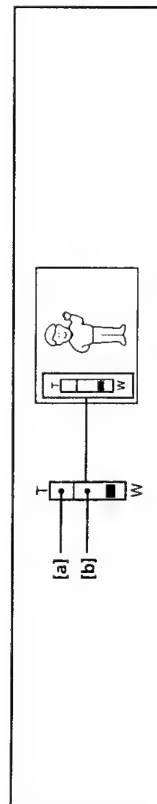
Press the zoom button firmly for high-speed zoom. Press it softly for relatively slow zooming.

Note on the focus range

You can shoot a subject that is at least about 2.6 feet (80 cm) in the telephoto position, 0.5 inch (1 cm) in the wide position away from the lens surface.

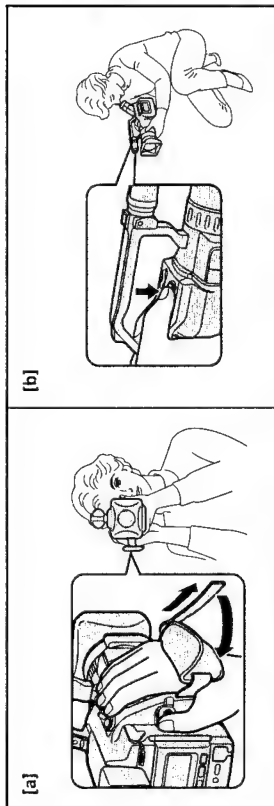
Notes on Digital Zoom

- More than 10x zoom is performed digitally, and the picture quality deteriorates as you go toward the T side. If you do not want to use the digital zoom, set the D ZOOM function to OFF in the menu system (p. 20).
- The horizontal bar in the power zoom indicator separates the digital zooming zone (above the bar [a]) and the optical zooming zone (under the bar [b]). If you set the D ZOOM function to OFF, the part above the bar disappears.



Hints for Better Shooting

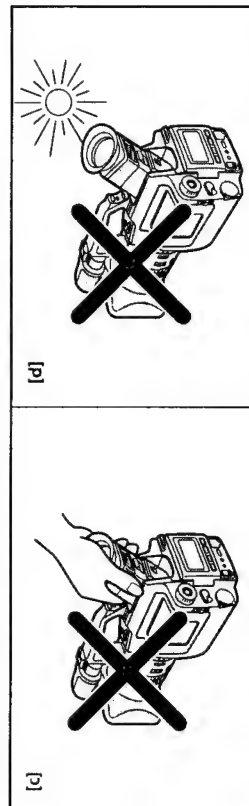
For hand-held shots, you'll get better results holding the camcorder according to the following suggestions:



- Hold the camcorder firmly and secure it with the grip strap so that you can easily manipulate the controls with your thumb [a].
- Place your right elbow against your side.
- Place your left hand under the camcorder to support it.
- Keep your fingers away from the built-in microphone.
- Place your eye firmly against the viewfinder eyecup.
- Use the viewfinder frame as a guide to determine the horizontal plane.
- You can record in a low position to get an interesting recording angle. Lift the viewfinder up to record from a low position (you can turn it up to about 80 degrees.) [b]. In this case, it's useful to use REC START/STOP located under the carrying handle.

Caution on the viewfinder

- Do not pick up the camcorder by the viewfinder. [c]
- Do not place the camcorder so as to point the viewfinder toward the sun. The inside of the viewfinder may be deformed. Be careful in placing the camcorder under sunlight or by the window. [d]



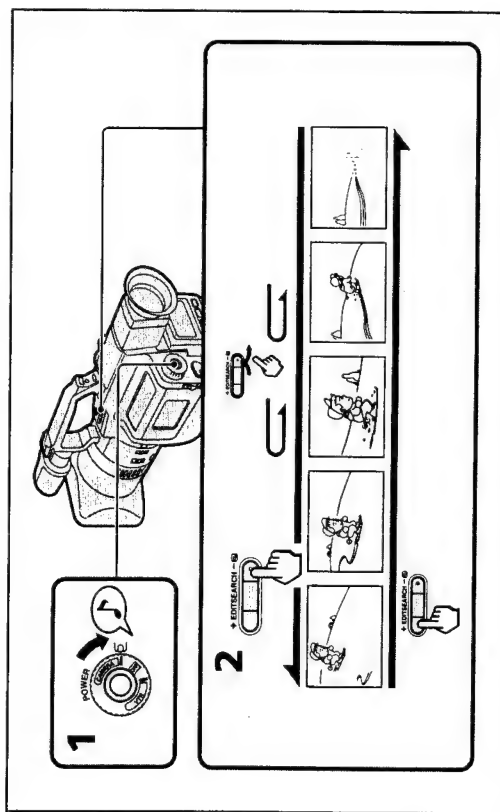
Place the camcorder on a flat surface or use a tripod

Try placing the camcorder on a table top or any other flat surface of suitable height. If you have a tripod for a still camera, you can also use it with the camcorder. Make sure the tripod screw is shorter than 9/32 inch (6.5 mm).

Checking the Recorded Picture

The editsearch function is used to view the recorded picture for a moment during recording. Using EDITSEARCH, you can review the last recorded scene or check the recorded picture in the viewfinder.

- (1) While pressing the centre button on the POWER switch, turn it to CAMERA.
- (2) Press the - (⊖) side of EDITSEARCH momentarily; the last few seconds of the recorded portion plays back (Rec Review). You can also monitor the sound by using headphones (not supplied). Hold down the - side of EDITSEARCH until the camcorder goes back to the scene you want. The last recorded portion is played back. To go forward, hold down the + side (Editsearch).



To Begin Rerecording

Press START/STOP. Provided you do not eject the cassette, the transition between the last scene you recorded and the next scene you record will be smooth.

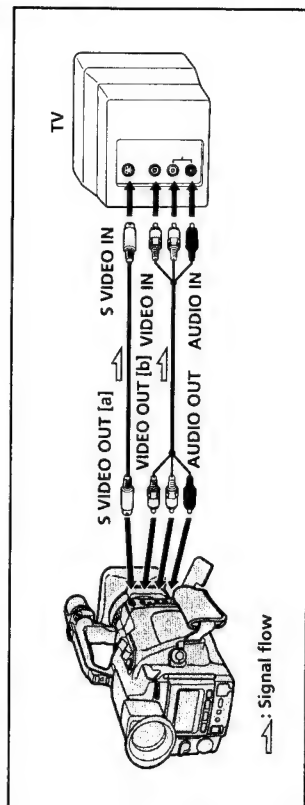
Connections for Playback

You can use this camcorder as a VCR by connecting it to your TV for playback. It is recommended to use the house current as the power source (p. 18).

Connecting Directly to a TV

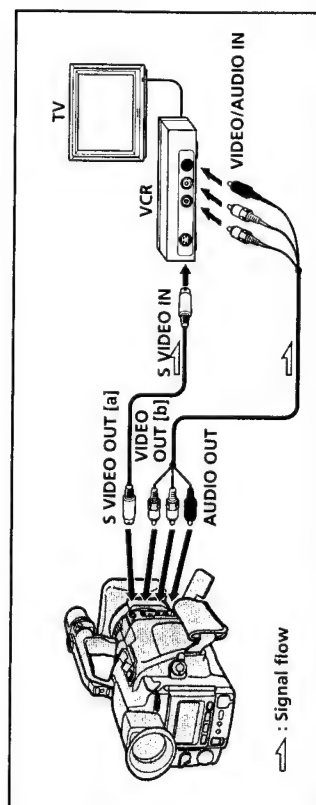
Connect the camcorder to your TV by using the supplied A/V connecting cable. Set the TV/VCR selector to VCR on the TV.

If you are going to connect the camcorder using the S video cable [a], you do not need to connect the yellow (video) plug of the A/V connecting cable [b].



If a VCR is connected to the TV

Connect the camcorder to LINE IN on the VCR by using the supplied connecting cable. Set the input selector on the VCR to LINE. Set the TV/VCR selector to VCR on the TV.



If your TV or VCR is monaural

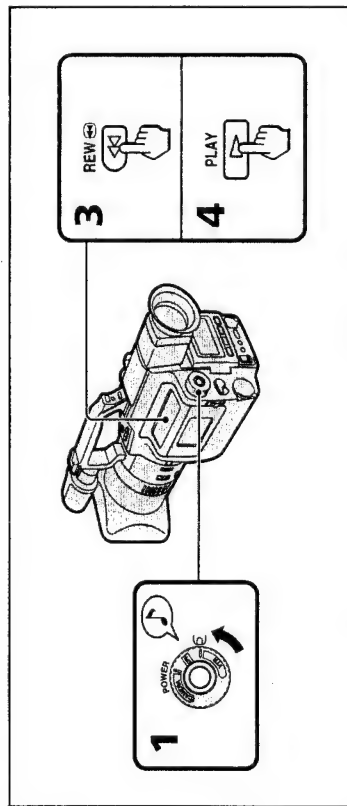
Connect only the white plug for audio on the TV or the VCR. With this connection, the sound is monaural, and the sound from the headphone jack on the camcorder is also monaural.

To connect a TV or a VCR without audio/video input jacks
Use an RFU adaptor (not supplied).

Playing Back a Tape

You can monitor the playback picture in the viewfinder. You can also watch it on a TV screen, after connecting the camcorder to a TV or VCR (p. 15). You can control playback using the supplied Remote Commander (p. 75).

- (1) While pressing the center button on the POWER switch, turn it to VTR.
- (2) Insert the recorded tape with the window facing out.
- (3) Press ◀ to rewind the tape.
- (4) Press ▷. Playback starts.



To stop playback, press □.

To fast-forward the tape, press ▶▶.

To monitor the sound while viewing the playback picture in the viewfinder

Connect headphones (not supplied) to the □ jack (p. 74).

To mark the portion you want to monitor again

Press ZERO SET MEMORY while playing back.

After you finish playing back, press ◀◀. The tape rewinds to the position you want (0:00:00) and stops.

Various Playback Modes

To view a still picture (playback pause)

Press II during playback. To resume playback, press II or ▷. When still picture mode lasts for 5 minutes or more, the camcorder automatically enters stop mode. To playback again, press ▷ again.

To locate a scene (Picture Search)

Keep pressing ◀◀ or ▶▶ during playback. To resume normal playback, release the button.

To monitor the high-speed picture while advancing the tape or rewinding (Skip scan)

Keep pressing ◀◀ while rewinding or ▶▶ while advancing the tape. To resume normal playback, press ▷.

To view the picture at 1/5 speed (Slow Playback)

Press ◀ or > to select direction, then press II during playback. To resume normal playback, press ▷. If slow playback lasts for about 1 minute, it shifts to normal speed automatically.

To view the picture at double speed

Press ◀ or > to select direction, then press x2 on the Remote Commander during playback. To resume normal playback, press ▷.

To view the picture frame by frame

Press ▷ during playback pause mode.

Press ◀ in reverse direction during playback pause mode.

To view the picture in reverse direction

Press ◀ during playback.

Notes on playback

- The sound is muted in the various playback modes.
- The previous scene may appear like mosaic noise during slow playback or playback pause. This is not a malfunction.

To display the indicators

Press DISPLAY (p. 75). Tape counter, remaining battery indicator and other indicators appear on the connected TV screen. To erase the indicators, press DISPLAY again.

Advanced Operations

Using Alternate Power Sources

You can choose any of the following power sources for your camcorder: battery pack (p.6), house current, and 12/24 V car battery. Choose the appropriate power source depending on where you want to use your camcorder.

Place	Power source	Accessory to be used
Indoors	House current	AC power adaptor AC-V515 and connecting cord DK-715 (supplied)
Outdoor	Battery pack	Battery pack NP-720 (supplied)
In a car	12 V or 24 V car battery	DC pack DC-V515

You cannot connect to this camcorder using the connecting cord supplied with AC-V515 or DC-V515. Use the connecting cord supplied with this camcorder.

This mark indicates that this product is an genuine accessory for Sony video products. When purchasing Sony video products, Sony recommends that you purchase accessories with this "GENUINE VIDEO ACCESSORIES" mark.



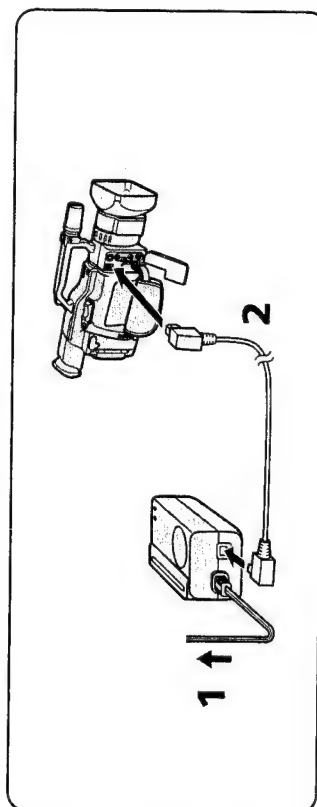
Note on power sources

Disconnecting the power sources or removing the battery pack during recording or playback may damage the inserted tape. If this happens, restore the power supply again immediately.

Using the House Current

To use the supplied AC power adaptor:

- (1) Connect the AC power cord to a wall outlet.
- (2) Connect the camcorder and the AC power adaptor using the supplied connecting cord.



You can charge the battery inserted in the camcorder by connecting the AC power adaptor to the camcorder and turning the power switch to OFF.

Charging time of the supplied NP-720 battery pack is approx. 150 minutes. While charging, the battery indicator appears in the display window:



After charging finishes, the indicator disappears.

You can also charge two batteries at a time by installing the battery pack and connecting the AC power adaptor. It takes about 4 hours to charge the batteries.

WARNING

AC power cord must only be changed at qualified service shop.

Precautions

- The set is not disconnected from the AC power source as long as it is connected to the wall outlet, even if the set itself has been turned off.
- To prevent accident from a short circuit, do not come into contact with the terminal inside the shutter at the rear of the camcorder.

Notes on the POWER lamp

- The POWER lamp will remain lit for a while even if the unit is unplugged after use. This is normal.
- If the POWER lamp does not light, disconnect the AC power cord. After about one minute, try again.

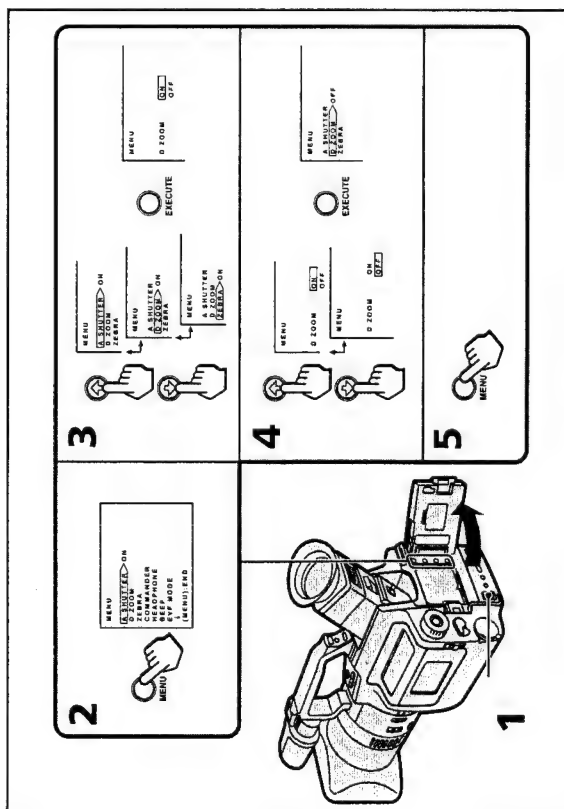
Using a Car Battery

Use the DC-V515 pack (not supplied). Connect the cord of the DC pack to the cigarette lighter socket of a car (12 V or 24 V). Connect the DC pack in the same way as the AC power adaptor. Use the connecting cord supplied with this camcorder.

Changing the Mode Settings

You can change the mode settings in the menu system to further enjoy the features and function of the camcorder.

- (1) Slide OPEN and open the battery cover.
- (2) Press MENU to display the menu in the viewfinder.
- (3) Press \blacktriangle or \blacktriangledown to select the desired item, then press EXECUTE.
- (4) Press \blacktriangle or \blacktriangledown to select the desired mode, then press EXECUTE. If you want to change the other modes, repeat steps 3 and 4.
- (5) Press MENU to erase the menu display.



To display the menu on the TV screen

Connect the camcorder to your TV (page 15), and press MENU.

Note on the menu system

You may need to repeat step 3 before you select the desired mode because some items have three steps.

Setting the Mode of Each Item

Select RETURN to return to main menu (item select).

Items in CAMERA and VTR Modes

COMMANDER <VTR4/OFF/ID/ID SET>

- Normally select VTR4.
- Select OFF when using the Remote Commander.
- Select ID when using the Remote Commander with the ID number set.
- Select ID SET to register the ID number using the same number as the Remote Commander. To set the ID, see page 77.

HEADPHONE <LOW/MID/HIGH>

- Normally select LOW.
- Select MID to slightly raise the volume of the headphone.
- Select HIGH to raise the volume of the headphone.

BEEP <ON/OFF>

- Normally select ON.
- Select OFF to turn the beep sound off.

EVF MODE <COLOR/BRIGHT>

- Select this item and change the level of the indicator by pressing \blacktriangle or \blacktriangledown to adjust the color intensity and brightness of the picture in the viewfinder.

CLOCK SET

- Select this item to reset the date or time. See page 60.

Items in CAMERA Mode only

A SHUTTER <ON/OFF>

- Normally select ON.
- Select OFF when adjusting the shutter speed.

D ZOOM <ON/OFF>

- Select ON to activate digital zooming. The zooming ability becomes 20x.
- Select OFF otherwise. The zooming ability becomes 10x.

ZEBRA <OFF/ON>

- Normally select OFF.
- Select ON to shoot with the zebra pattern displayed in the viewfinder.

FRAME REC <OFF/ON>

- Normally select OFF.
 - Select ON for cut recording.
- When you remove the power source, the setting becomes OFF.

INT REC <SET> <INTERVAL/REC TIME>

- Normally select OFF. Select ON to make interval recording.
 - Select INTERVAL to set or change the waiting time for interval recording.
 - Select REC TIME to set or change the recording time for interval recording.
- When you remove the power source, the setting becomes OFF, but the waiting time and recording time are retained.

SELFTIMER <10SEC/25SEC>

- Normally select 10SEC.
- Select 25SEC to set the time for self-timer recording to 2 sec.

CUSTOM <SET> <COLOR LV/SHARPNESS/WB SHIFT/AE SHIFT/GAINSHIFT(0dB/-3dB)/RESET>

- Normally select OFF. Select ON for camera recording based on the setting mode preset in the CUSTOM menu.
- Select COLOR LV/SHARPNESS/WB SHIFT/AE SHIFT and change the level of the indicator by pressing \blacktriangle or \blacktriangledown to preset the color intensity (COLOR LV), sharpness (SHARPNESS), white balance (WB SHIFT), and brightness (AE SHIFT) of the picture.
- Select GAINSHIFT to preset the gain-shift of the picture (0 dB/-3 dB).
- Select RESET to reset the preset setting in the CUSTOM menu.

Changing the Mode Settings

Items in VTR Mode only

A MIX BAL

- Select this item and change the level of the indicator by pressing **↑** or **↓** to adjust the volume balance between audio mode ST1 and ST2.

SEARCH <C MEMORY/OFF>

- Normally select C MEMORY to activate cassette memory search function.
- Select OFF otherwise. In this case, the recorded picture is searched without cassette memory function.

When DIGITAL MODE is set to OVERLAP

You cannot set D ZOOM to ON. Once you set DIGITAL MODE to OVERLAP, D ZOOM settings are changed to OFF automatically.

About FRAME REC and INT REC setting

Both settings are automatically set to off when:

- Power switch is set to OFF or VTR.
- Power source is disconnected.
- PHOTO button is pressed.

Other settings retains as long as lithium battery is installed even if power source is disconnected.

Fader and Overlap

You can fade in or out to give your recording a professional appearance.

When fading in, the picture gradually fades in from black while the sound increases. When fading out, the picture gradually fades to black while the sound decreases.

With the overlap function, the picture gradually fades in over a still picture of the last scene recorded.

Using the Fader and Overlap Function

When Fading in [a]

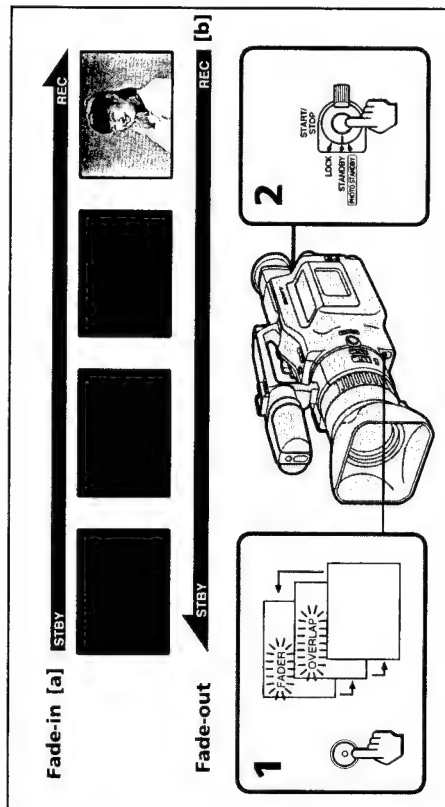
(1) While the camcorder is in Standby mode, press FADER/OVERLAP. The fade indicator starts flashing.

(2) Press START/STOP to start recording. The fade indicator stops flashing, fading in and recording starts.

When Fading out [b]

(1) During recording, press FADER/OVERLAP. The fade indicator starts flashing.

(2) Press START/STOP to stop recording. The fade indicator stops flashing, fading out starts, and then recording stops.

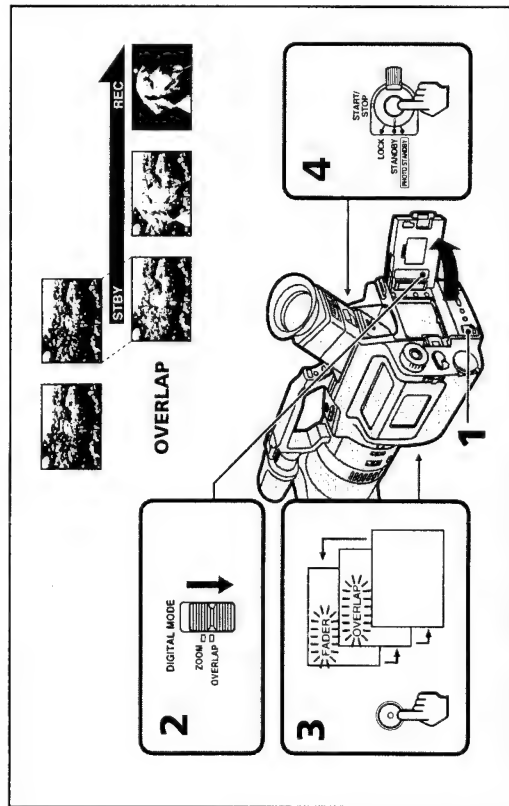


Fader and Overlap

When using Overlap

- (1) Slide OPEN and open the battery cover.
- (2) Set DIGITAL MODE on the rear of battery cover to OVERLAP.
- (3) Press FADER/OVERLAP repeatedly until "OVERLAP" appears in the viewfinder.
- (4) Press START/STOP to start recording.

The scene being shot gradually fades in over the still picture of the last recorded scene.



To Cancel the Fade-in/Fade-out Function

Before pressing START/STOP, press FADER/OVERLAP until the fade indicator disappears.

To use the fading function repeatedly

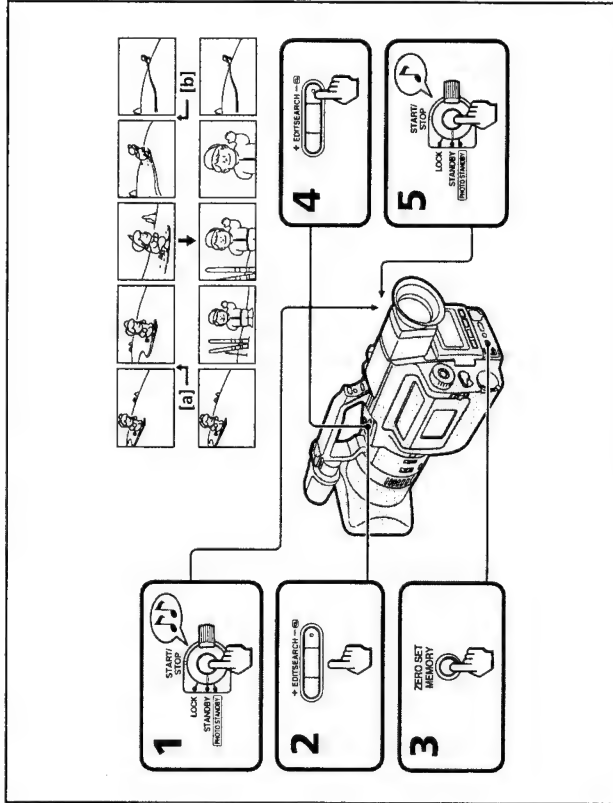
Start from step 1 each time.

Notes on the fading and overlap function

- You cannot fade in, fade out, or use the overlap function while you record with interval recording, cut recording or photo recording.
- The last scene for overlap is stored only when you record and press START/STOP again (recording standby/pause mode) before using overlap. In other cases, this camcorder starts Rec Review automatically to store the picture on the tape before it overlaps the scene being shot.

Re-recording a Picture in the Middle of a Recorded Tape

You can re-record a scene in the middle of a recorded tape by setting the starting [a] and ending [b] points. The previously recorded portion will be erased.



(1) Press START/STOP while recording.

The camcorder enters Standby mode.

(2) Hold down the + (forward) or - (reverse) side of EDIT/SEARCH until the camcorder goes to the point where you want to end the insertion. [b]

The camcorder enters Standby mode again.

(3) Press ZERO SET MEMORY.

The counter is reset to "0000:00".

(4) Hold down the - side of EDIT/SEARCH until the camcorder goes back to the point where you want to start the insertion. [a]

The camcorder enters Standby mode again.

(5) Press START/STOP to start re-recording.

The insert recording stops automatically at the counter zero point, and the camcorder enters Standby mode again. Zero set memory resumes automatically.

To change the end point

Press ZERO SET MEMORY so that "ZERO SET MEMORY" disappears. Repeat steps 2 to 4.

Re-recording a Picture in the Middle of a Recorded Tape

Notes on editsearch

- The picture may be distorted at the end of the inserted portion when it is played back.
- Zero set memory may not function when there is a blank portion between pictures on a tape.
- You can re-record without using the zero set memory. Skip steps 2 and 3. Press STOP to stop recording.

To use the insert recording repeatedly

Start from step 1 each time.

Photo Recording

You can record a still picture like a photograph for about seven seconds. This mode is useful when you want to enjoy a picture such as a photograph or when you print a picture using a video printer. Shutter speed is automatically adjusted up to 1/1000 depending on the exposure.

(1) Set the standby switch to PHOTO STANDBY.

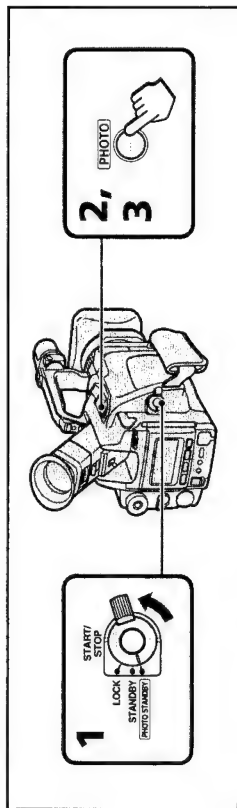
(2) Keep pressing PHOTO lightly until a still picture appears in the viewfinder.

To change the still picture, release PHOTO, select still picture again, and keep pressing PHOTO lightly again.

To select a still picture, you cannot use the PHOTO button on the Remote Commander.

(3) Press PHOTO deeper.

The still picture in the viewfinder is recorded for about seven seconds. The sound during those seven seconds is also recorded. You cannot turn off the power or turn STANDBY down to LOCK while recording.



Note on using self-timer recording

When you use self-timer recording with photo recording, you cannot select the picture. In this case, once you press PHOTO, self-timer recording starts, and the still picture at the point the self-timer starts is recorded.

When using the video printer

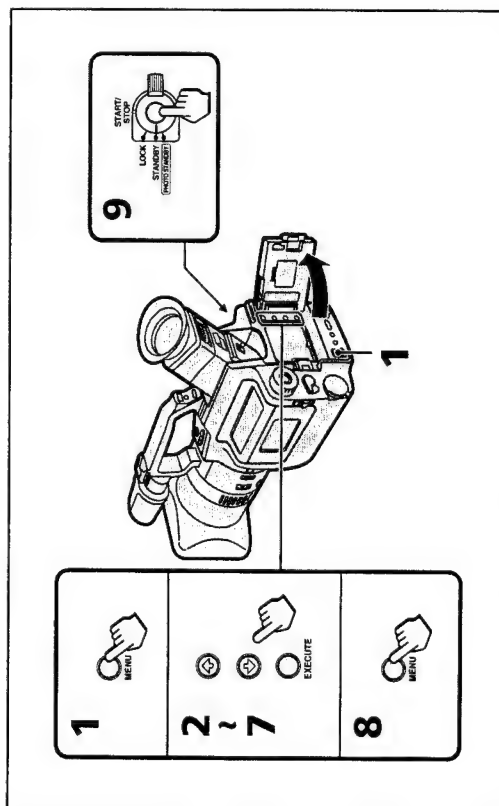
The Remote Commander (supplied) is useful when printing the picture using the CVP-M1 Video printer (not supplied). After connecting each LANC control jack using video connecting cable and selecting the desired picture to print, press PRINT on the supplied Remote Commander instead of pressing CAPTURE and PRINT on the video printer.

Refer to the instruction manual of the video printer also.

Interval Recording

You can make a time-lapse recording by setting the camcorder to automatically record and standby sequentially. You can achieve an excellent recording for flowering, emergence, etc., with this function.

- (1) Slide OPEN and open the battery cover while the camcorder is in Standby mode. Press MENU to display the menu in the viewfinder.
- (2) Press \blacktriangle or \blacktriangledown to select INT REC, then press EXECUTE.
- (3) Press \blacktriangle or \blacktriangledown to select ON, then press EXECUTE.
- (4) Press \blacktriangle or \blacktriangledown to select INTERVAL, then press EXECUTE.
- (5) Press \blacktriangle or \blacktriangledown to select the desired waiting time, then press EXECUTE.
The time: 30SEC \leftrightarrow 1MIN \leftrightarrow 5MIN \leftrightarrow 10MIN.
- (6) Press \blacktriangle or \blacktriangledown to select REC TIME, then press EXECUTE.
- (7) Press \blacktriangle or \blacktriangledown to select the desired recording time, then press EXECUTE.
The time: 0.25SEC \leftrightarrow 0.5SEC \leftrightarrow 1SEC \leftrightarrow 2SEC.
- (8) Press MENU to erase the menu display.
- (9) Press START/STOP to start interval recording.



To stop interval recording before the tape ends
Press START/STOP.

To cancel the interval recording

- Set the INT REC mode to OFF in the menu system.
- Turn STANDBY down to LOCK.
- Turn the power switch to OFF or VTR.

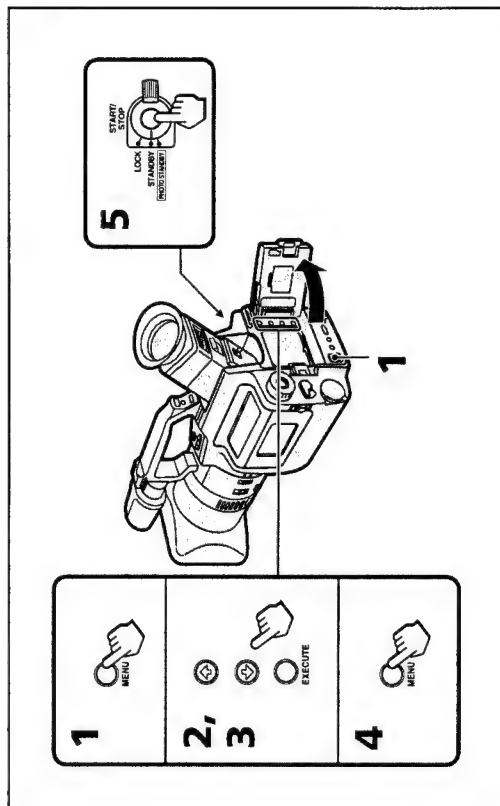
Note on interval recording

You cannot do interval recording with photo recording.

Cut Recording

You can make a recording with a stop-motion animated effect using cut recording. To create this effect, alternately move the subject a little and make a cut recording. Secure the camcorder and use the Remote Commander for effective cut recording.

- (1) Slide OPEN and open the battery cover while the camcorder is in Standby mode. Press MENU to display the menu in the viewfinder.
- (2) Press \blacktriangle or \blacktriangledown to select FRAME REC, then press EXECUTE.
- (3) Press \blacktriangle or \blacktriangledown to select ON, then press EXECUTE.
- (4) Press MENU to erase the menu display.
- (5) Press START/STOP on the camcorder or the Remote Commander to start cut recording.
- (6) Move the subject, and repeat step 5.



To cancel the cut recording


- Set the FRAME REC mode to OFF in the menu system.
- Turn STANDBY down to LOCK.
- Turn the power switch to OFF or VTR.

Notes on cut recording

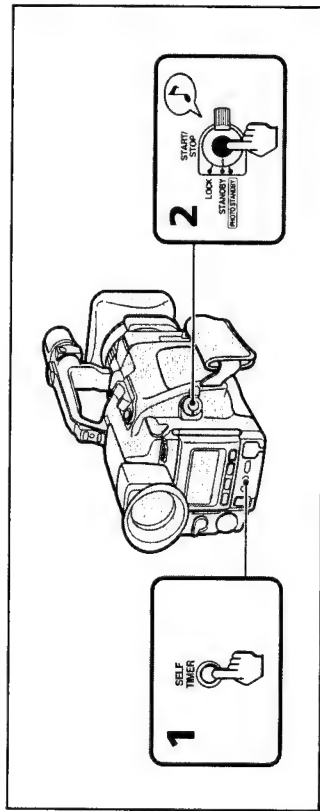
- The portion immediately after cut recording is completed may be longer than four frames.
- You cannot do cut recording with photo recording.
- Remaining tape indicator may not be accurate if you do cut recording repeatedly.

Self-timer Recording

You can make a recording with the self-timer when the SELF TIMER mode is set to ON (2SEC or 10SEC) in the menu system. This mode is useful when you want to make a recording at yourself.

- (1) Press SELF TIMER to display  in the viewfinder while the camcorder is in Standby mode.
- (2) Press START/STOP.

Self-timer starts counting down with a beep sound, then recording starts automatically at the time you set.




To stop self-timer recording

Press START/STOP.

Use the Remote Commander for convenience.

To cancel self-timer recording

Press SELF TIMER so that  disappears from the viewfinder while the camcorder is in Standby mode.

Self-timer recording mode is canceled when

- Self-timer recording is finished.
- Power switch is set to OFF or VTR.
- Standby selector is set to LOCK.
- Interval recording starts.
- Cut recording starts.

To change the time for self-timer recording

Set it at the SELF TIMER mode in the menu system (page 20).

To use photo recording with self-timer recording

Set the standby selector to PHOTO STANDBY, press SELF TIMER, and press PHOTO. Self-timer starts counting down with a beep sound, then photo recording starts automatically at the time you set (page 27).

Note that self-timer recording will not function when you press SELF TIMER if you keep pressing PHOTO lightly. In this case, release PHOTO once and start from step 1 again.

Selecting Automatic Mode and Manual Adjustment

You can select three types of adjustment mode for exposure, shutter speed, white balance, focus, and recording level.

- Automatic Mode: offers you worry-free operation under most shooting conditions. Normally use this mode. Set HOLD/AUTO LOCK selector to AUTO LOCK.
- PROGRAM AE Mode: offers you three PROGRAM AE modes to fit the shooting situation. Set HOLD/AUTO LOCK selector to center (auto lock release) position.
- Manual Adjustment: offers you creative recording under various conditions. Set HOLD/AUTO LOCK selector to center (auto lock release) position.

Mode	Exposure (iris)	Shutter Speed	White Balance	Focus*	Recording Level
Automatic	A	A	A	A/M	A
PROGRAM AE					
Priority to Iris	M	A	S	A/M	M
Priority to shutter	A	M	S	A/M	M
Twilight	A	A	S	A/M	M
(No indication)	A	A	S	A/M	M
Manual	A	M	S	A/M	M

A: Automatic adjustment

M: Manual adjustment

S: Select

*: You can select automatic or manual to adjust focusing at any mode.

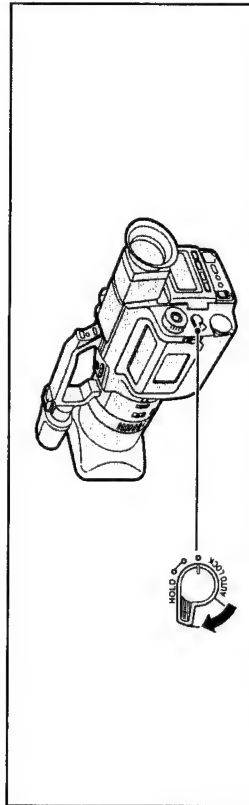
Using Automatic Mode

Set HOLD/AUTO LOCK selector to AUTO LOCK. In automatic mode, the camcorder adjusts the exposure, shutter speed**, white balance, and recording level automatically. The focus can be adjusted automatically by setting the FOCUS switch to AUTO.

** When the A SHUTTER mode in the menu system (page 20) is set to

ON: 1/60 to 1/250 automatic adjustment

OFF: 1/60 fixed



PROGRAM AE Mode

You can select from three PROGRAM AE modes.

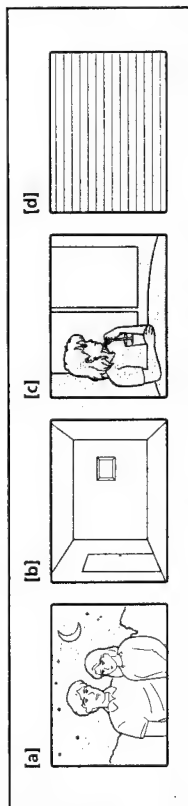
In this mode, you can adjust exposure (p. 38), shutter speed (p. 40), white balance (p. 43), and recording level (p. 46) manually.

Focusing Manually

To activate auto focusing, very bright condition and proper contrast are required. Use manual focus according to the conditions. You can focus manually even if the HOLD/AUTO LOCK selector is set to AUTO LOCK (Automatic Mode).

When to Use Manual Focus

In the following cases you should obtain better results by adjusting the focus manually.



- Insufficient light [a]
- Subjects with little contrast — walls, sky, etc. [b]
- Too much brightness behind the subject [c]
- Horizontal stripes [d]
- Bright subject or subject reflecting light
- Shooting a stationary subject when using a tripod

Focusing Manually

When focusing manually, first focus in telephoto before recording, and then reset the shot length. (1) Set FOCUS to MANUAL while the camcorder is recording or in Standby mode.

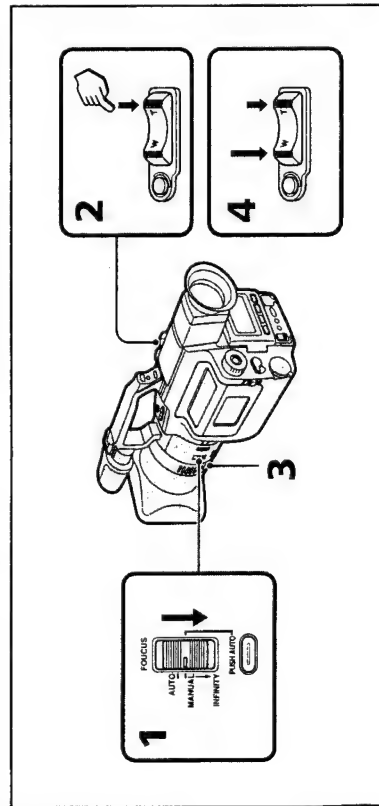
(2) Keep pressing the "T" (telephoto) side of the zoom button until the zooming stops.

(3) Turn the focus ring to achieve a sharp focus.

While turning the focus ring, >O< or >O< appears in the viewfinder.

>O< appears in the viewfinder in focus.

(4) Set the desired shot length using the zoom button.



When >O< or >O< appears

Turn focus ring clockwise when >O< appears, or turn it counterclockwise when >O< appears in the viewfinder. If you cannot get in focus, turn in the reverse direction.

When >O< appears, focus is at infinity.

When >O< appears, subject is too close.

Notes on >O< indicator

- It does not appear when you select a slow shutter speed (while DIGITAL MODE switch is set to ZOOM).
- It disappears if you don't turn the focus ring for 1.5 seconds.

To Reactivate Auto Focusing

Set FOCUS to AUTO to disappear >O< in the viewfinder.

Shooting in relatively dark places

Shoot in wide angle after focusing in telephoto.

Shooting a scene with lots of movement in bright light

Set the zoom button fully to the wide-angle position.

Close-ups (Macro)

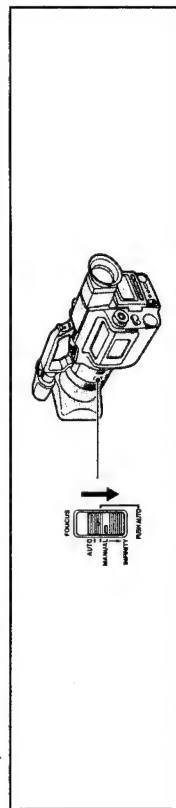
Set the zoom button fully to the wide-angle position.

Focusing to Infinity

Focus to infinity when the camcorder focuses on a nearby subject while you want on focus to a distant subject.

Slide FOCUS in the direction of the arrow (INFINITY) to focus to infinity.

When you release FOCUS, manual focus resumes.



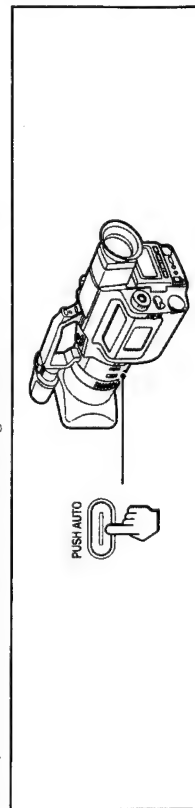
Shooting with Auto Focusing Momentarily

Press PUSH AUTO.

The auto focus functions while you are pressing PUSH AUTO.

Use this switch to focus on one subject and then another with smooth focusing.

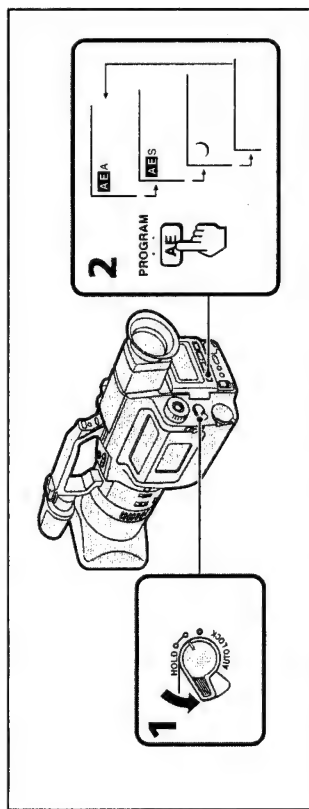
When you release PUSH AUTO, manual focusing resumes.



Using the PROGRAM AE Function

Select one of the three PROGRAM AE modes, then go to each step.

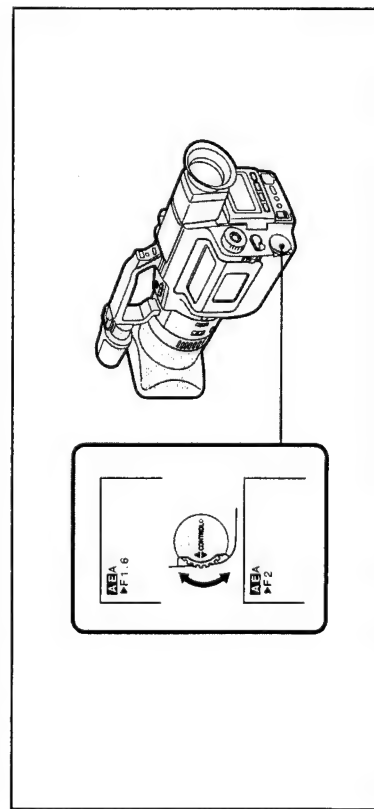
- (1) Set HOLD/AUTO LOCK selector to the center (auto lock release) position.
- (2) Press PROGRAM AE repeatedly to select the desired mode. The mode changes: **AEA** (Priority to iris) → **AES** (Priority to shutter speed) → **J** (Twilight) → No indication (Manual), cyclically in the viewfinder.



Giving Priority to Iris **AEA, A**

You can select the exposure (iris) to determine the desired depth of field. Gain and the shutter speed are automatically set in combination with the exposure (iris) value to maintain appropriate exposure.

Turn the CONTROL dial to select the desired exposure (iris) value. As you turn the dial, the F value changes between F1.6 and F11. For a smaller exposure (iris), select a higher value. Gain and the shutter speed change in accordance with the selected exposure (iris) value.



To return to automatic mode

Set HOLD/AUTO LOCK selector to AUTO LOCK, or press PROGRAM AE repeatedly until **AEA**, **AES**, or **J** disappears from the display.

When you focus in telephoto

You cannot choose F1.6.

About the depth of field

The depth of field is the in-focus range, measured from the distance behind a subject to the distance in front. The depth of field can vary with the exposure (iris) value and the focal length. Lowering the F value (large iris) reduces the depth of field. Raising the F value (smaller iris) provides a larger depth of field. Zooming in telephoto position offers a smaller depth of field while the depth of field in wide-angle position is greater.

The depth of field	Shallow (lowering the F value)	Deep (raising the F value)
Exposure (iris)	Smaller iris	Larger iris
Zoom	Telephoto (T)	Wide (W)

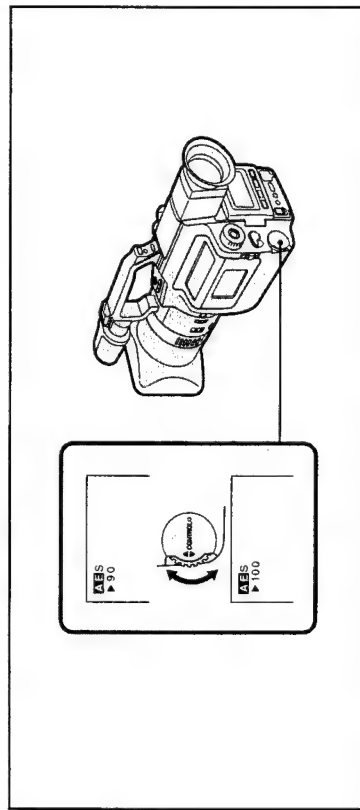
Giving Priority to Shutter Speed **AES, S**

You can select the shutter speed between 1/60 and 1/10000. When you select a faster shutter speed, movement appears clearer with less shaking when the tape is played back in still or slow mode. This mode is most effective in the following cases:

- A golf swing or a tennis match in fine weather with the ball movement captured clearly
- Playing back certain scenes with high-speed movements in clear sharp pictures

Turn the CONTROL dial to select the desired shutter speed. As you turn the dial, shutter speed changes between 1/60 and 1/10000.

For a faster shutter speed, select a larger value indicator in the viewfinder. The exposure (iris) value changes in accordance with the selected shutter speed.



Using the PROGRAM AE Function

To select the best shutter speed

Example	Shutter speed
• A golf swing or tennis match in fine weather (to view the hit ball clearly in still picture mode, set to 1/1000 to 1/10000)	1/500 to 1/1000
• A landscape shot from a moving car	1/125 to 1/500
• A moving roller coaster on an overcast day	1/100
• An athletic scene, marathon, etc.	
• Indoor sports	
• Replacement for the ND2 filter (to halve the exposure)	
• In sunny weather (to avoid an out-of-focus picture due to a small iris)	1/90 to 1/100

To return to automatic mode

Set HOLD/AUTO LOCK selector to AUTO LOCK, or press PROGRAM AE repeatedly until **AE**, **AE**, or **J** disappears from the display.

Shutter speed indicator in the viewfinder

For example, the 1/100 shutter speed is displayed as "100" in the viewfinder.

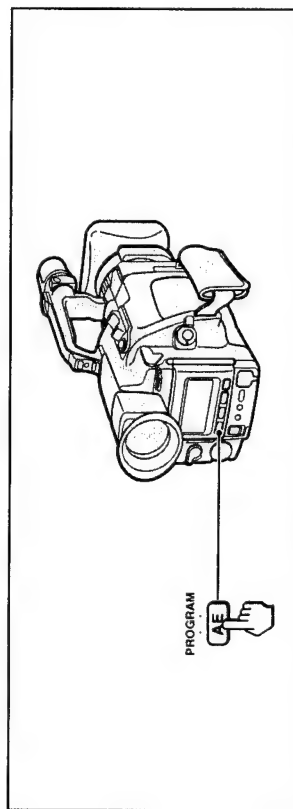
Note on higher shutter speed

When shooting a very bright subject, a vertical band (smear) may appear on the screen if the shutter speed is set too high.

Using with Twilight Mode **J**

You can record a subject such as night views, neon signs or fireworks, reducing color drop out.

Press PROGRAM AE repeatedly so that **J** appears in the display while the camcorder is in Standby mode or recording.



To return to automatic mode

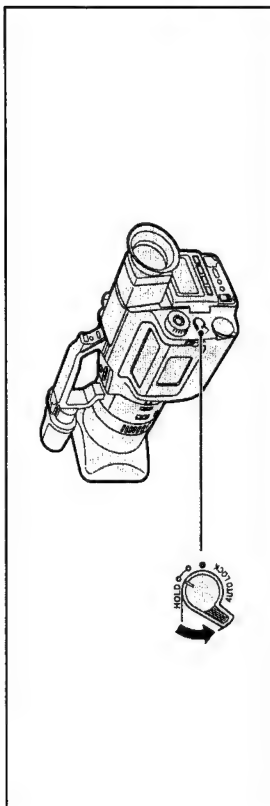
Set HOLD/AUTO LOCK selector to AUTO LOCK, or press PROGRAM AE repeatedly until **AE**, **AE**, or **J** disappears from the display.

About twilight mode setting

The shutter speed is locked at 1/60, and the gain is adjusted to keep it below 6 dB to prevent the increase of noise.

To lock the PROGRAM AE mode and manual settings

Set HOLD/AUTO LOCK selector to HOLD. The EXPOSURE, SHUTTER SPEED, WHT BAL., REC LEVEL, PROGRAM AE buttons, and CONTROL, EXPOSURE dials do not function.

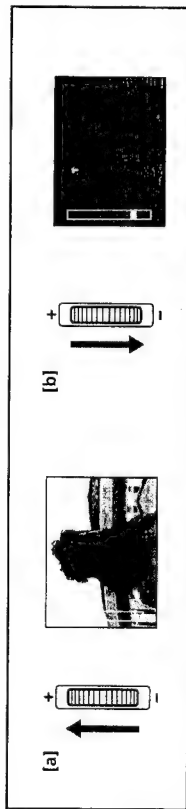


About the previous settings

The lithium battery must be installed to temporarily save manual settings if you detach the battery. The settings are saved for five minutes.

Adjusting the Exposure

Adjust the exposure manually under the following cases.



[a] Turn the exposure dial to + when:

- The background is too bright (backlighting)
- Insufficient light: most of the picture is dark

[b] Turn the exposure dial to - when:

- The subject is bright and the background is dark
- You want to record the darkness faithfully

Adjusting the Exposure

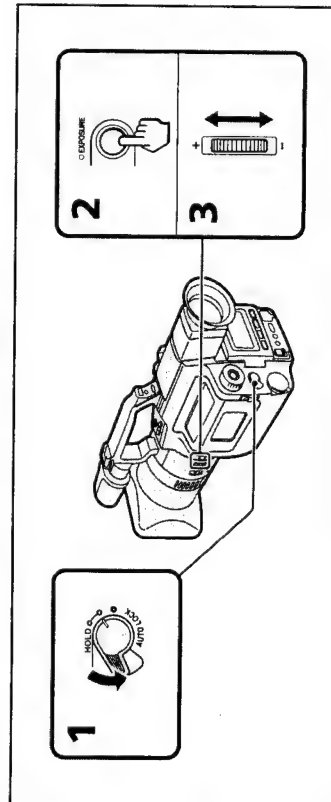
(1) Set HOLD/AUTO LOCK selector to the center (auto lock release) position while the camcorder is in Standby mode.

(2) Press EXPOSURE.

The exposure is locked at the value which was selected automatically at that time.

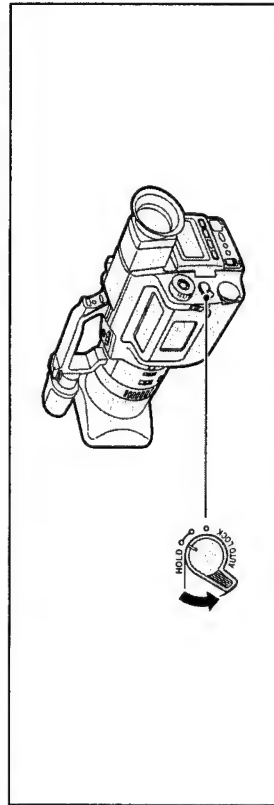
(3) Turn EXPOSURE dial to select the desired exposure value. As you turn the dial, the exposure (iris) value changes between OPEN and CLOSE and the exposure value changes between 0 (-3) dB and +18dB while the iris value is set to OPEN.

To increase the exposure to brighten the picture, select a higher level.



To lock the manual settings

Set HOLD/AUTO LOCK to HOLD after making the settings. The EXPOSURE, SHUTTER SPEED, WHT BAL., PROGRAM AE and REC LEVEL buttons, the CONTROL and EXPOSURE dials do not function.



To return to automatic mode

Set HOLD/AUTO LOCK selector to AUTO LOCK.

To change the setting

Repeat steps 1 to 4.

To cancel the setting

Press the EXPOSURE button again after step 2. The EXPOSURE indicator disappears from the viewfinder. The automatic exposure mode is resumed.

Notes on exposure level

- When you select an exposure level that is too high, the picture may be distorted.
- To select -3dB, select CUSTOM and set GAINSHIFT to -3dB in the menu system.

Note on iris/gain value indicator

The information of the EXPOSURE dial does not appear even if you press EXPOSURE while the camcorder is in PROGRAM AE mode (AE, A, AFS, or J).

Notes on while adjusting the exposure

- CONTROL dial and SHUTTER SPEED button do not function.
- The setting is canceled if you press the PROGRAM AE button.

Adjusting the Shutter Speed

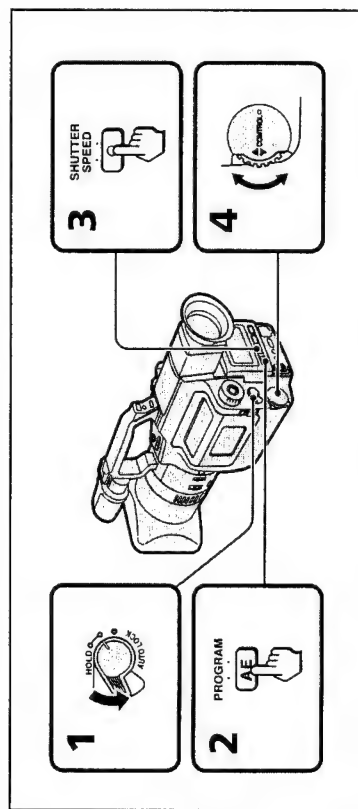
- (1) Set HOLD/AUTO LOCK selector to the center (auto lock release) position while the camcorder is in Standby mode.
- (2) Press PROGRAM AE repeatedly until **AE A**, **AE S**, or **AE J** disappears from the display.
- (3) Press SHUTTER SPEED.

The speed is locked at the value which was selected automatically at that time.

As you press SHUTTER SPEED the speed changes 1/100 and 1/1000.

- (4) Turn CONTROL dial to select the desired speed. As you turn the dial, speed changes:
1/4 ↔ 1/8 ↔ 1/15 ↔ 1/30 ↔ ... ↔ 1/4000 ↔ 1/6000 ↔ 1/10000

To increase the shutter speed, select a smaller setting (large value indicator in the viewfinder).



To lock the manual settings

Set HOLD/AUTO LOCK to HOLD after making the settings. The EXPOSURE, SHUTTER SPEED, WHITE BAL, PROGRAM AE and REC LEVEL buttons, the CONTROL and EXPOSURE dials do not function.

To return to automatic mode

Set HOLD/AUTO LOCK selector to AUTO LOCK.

To change the setting

Repeat steps 1 to 4 above.

To cancel the setting

Press the SHUTTER SPEED button again after step 2. The SHUTTER SPEED indicator disappears from the viewfinder.

Note on the shutter speed

You can set the speed to 1/4, 1/8, 1/15, and 1/30 only when you set the DIGITAL MODE switch to ZOOM.

For quick access to the desired shutter speed

First press SHUTTER SPEED twice to set to 1/100, then press SHUTTER SPEED again to set to 1/1000. Turn the CONTROL dial for quick access to speeds of more than 1/1000.

Using the ND Filter

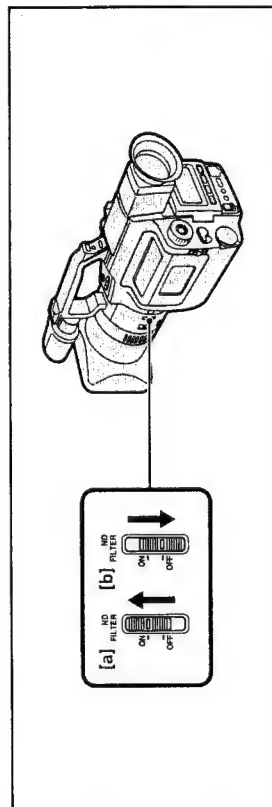
Using the ND filter (correspond to one-tenth the quantity of light), you can record a picture clearly, preventing the picture from going out of focus under bright conditions.

When ND ON flashes in the viewfinder [a]

Set ND FILTER to ON.

When ND OFF flashes in the viewfinder [b]

Set ND FILTER to OFF.

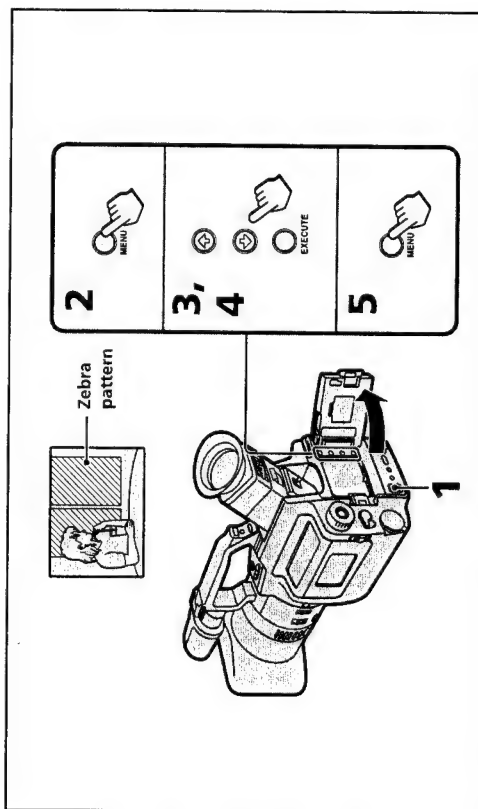


Using with the Zebra Pattern

You can set the camcorder to display a zebra pattern (diagonal stripes) in the portion of the picture in the viewfinder with a subject whose brightness exceeds a certain level. The portion of the picture where zebra pattern appears is an area of high brightness and overexposure. You can check the picture level of a subject by displaying the zebra pattern. Use the zebra pattern as a guide for adjusting the exposure (iris) and shutter speed so that you can get the desired picture.

Before you start recording, set ZEBRA to ON in the menu system.

- (1) Slide OPEN and open the battery cover while the camcorder is in Standby mode.
- (2) Press MENU to display the menu in the viewfinder.
- (3) Press \uparrow or \downarrow to select ZEBRA, then press EXECUTE.
- (4) Press \uparrow or \downarrow to select ON, then press EXECUTE.
- (5) Press MENU to erase the menu display.



Note on shooting with the zebra pattern

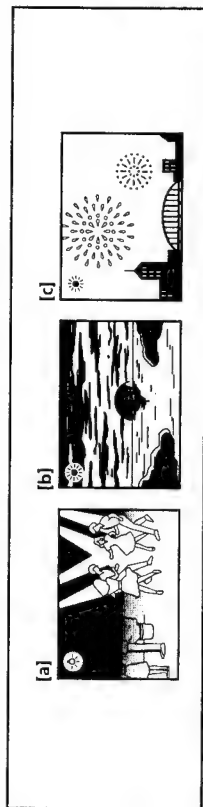
Even though you see the zebra pattern in the viewfinder, the zebra pattern is not recorded.

Adjusting the White Balance

White balance adjustment makes white subjects look white and allows more natural color balance for camera recording. Normally white balance is automatically adjusted. You can obtain better results by adjusting the white balance manually when lighting conditions change quickly or when recording outdoors: e.g., neon signs, fireworks.

Selecting the Appropriate Mode

Select the appropriate white balance mode under the following conditions.



Indoor mode

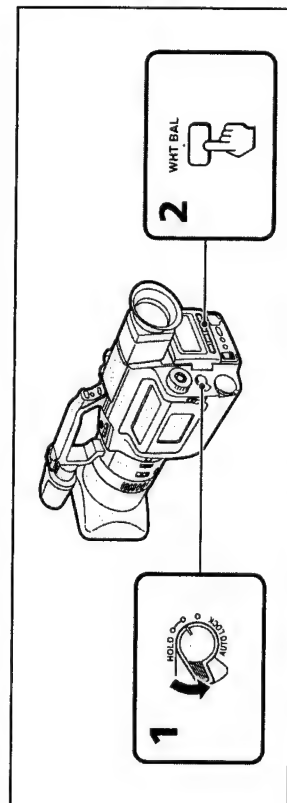
- Lighting condition changes quickly. [a]
- Too bright place such as photography studios
- Under sodium lamps or mercury lamps

Outdoor mode

- Under a color matching fluorescent lamp
- Recording a sunset/sunrise, just after sunset, just before sunrise [b], neon signs, or fireworks [c]

Setting the White Balance

- (1) Set HOLD/AUTO LOCK selector to the center (auto lock release) position while the camcorder is in Standby mode.
 - (2) Press WHT BAL repeatedly to select the appropriate white balance mode.
- Each time you press the button, the indicator inside the viewfinder changes:
No indicator (auto) → WHT BAL → WHT BAL (outdoor) → WHT BAL (indoor)



To return to automatic white balance mode


Set HOLD/AUTO LOCK selector to AUTO LOCK or press WHT BAL repeatedly until no indicator appears in the viewfinder.

Adjusting the White Balance


Locking the white balance setting (One-push white balance mode)

When you set the white balance to one-push white balance mode, the setting is locked and maintained even if lighting conditions change, and saved for one hour after power sources such as the battery are detached if the lithium battery is inserted. You can achieve recording with natural colors without being affected by ambient light.

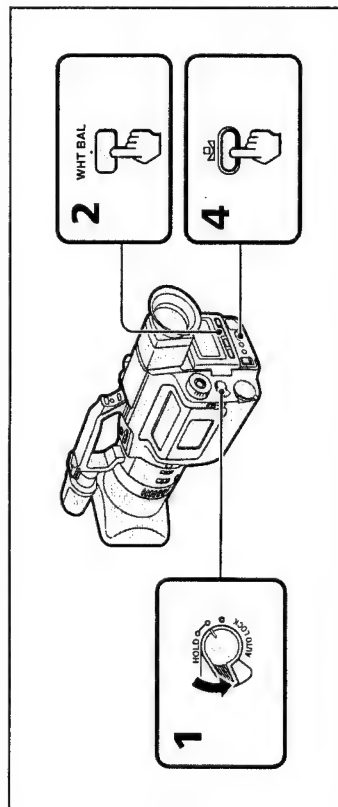
(1) Set HOLD/AUTO LOCK selector to the center (auto lock release) position.

(2) Press WHT BAL twice to display  in the viewfinder.




(3) Shoot a white object such as paper fully in the viewfinder.

(4) Press .



The  indicator flashes rapidly. When the white balance has been adjusted and stored in the memory, the indicator stops flashing.




Notes on the indicator in the viewfinder

- The state of the indicator shows as follows:
 - Slow flashing: White balance is not adjusted.
 - Fast flashing: White balance is being adjusted after pressing the  button.
 - Lights up: White balance has been adjusted.
- When the  indicator remains flashing even if you press the  button, shoot in automatic white balance mode. Press WHT BAL until no indicator appears in the viewfinder or set HOLD/AUTO LOCK selector to AUTO LOCK.

Notes on white balance

- When you shoot with studio lighting or video lighting, use the  (indoor) mode.
- When you shoot with fluorescent lighting, use automatic white balance mode. If you use the  mode, white balance may not be adjusted appropriately.

Shooting when the lighting condition changes

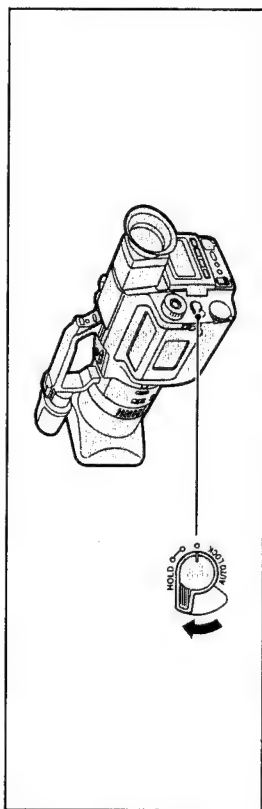
- When the lighting condition has changed, readjust the white balance with the  button while the camcorder is in Standby mode. This button does not function during recording.
- When you adjust the exposure (iris) and shutter speed manually, and move from indoors to outdoor or vice-versa, set HOLD/AUTO LOCK selector to AUTO LOCK, then set HOLD/AUTO LOCK selector to the center position again.
- When you move from indoors to outdoors or vice-versa, or detach the battery for replacement while shooting in automatic white balance mode, point the camcorder at a white subject about 10 seconds before you start recording.

Adjusting the Recording Sound

You can adjust the recording sound level. Use headphones to monitor the sound when you adjust.

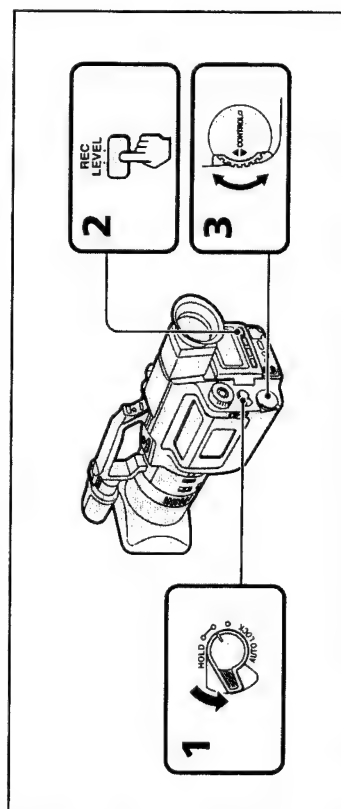
To adjust the recording sound automatically

Set HOLD/AUTO LOCK selector to AUTO LOCK.



To adjust the recording sound manually

- (1) Set HOLD/AUTO LOCK selector to the center position.
- (2) Press REC LEVEL to display ► in the viewfinder.
- (3) Turn CONTROL dial to adjust the sound level, so that the PEAK indicator does not light up. It is recommended to use headphones (not supplied) to monitor the sound when you adjust. As you turn the dial, the sound level changes between 0 (no sound) and 10 in 0.5 steps.



To lock the setting

Set HOLD/AUTO LOCK selector to HOLD.

To return to automatic recording sound


Press REC LEVEL until ► disappears from the viewfinder.

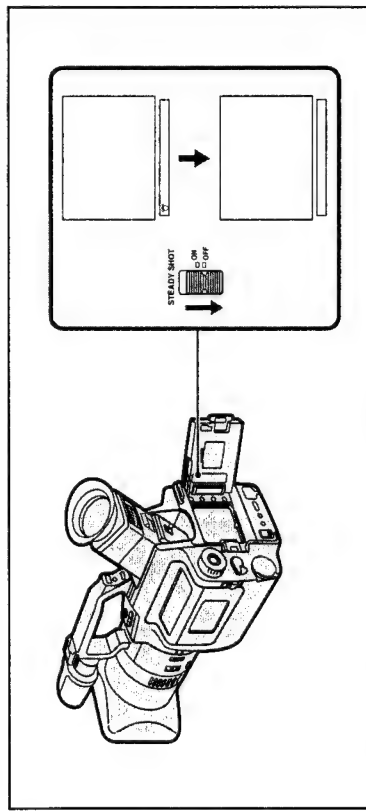
Notes on the adjustment

- The sound level setting is retained as long as the power is on and for about five minutes after the power turns off. After that the level is set to 7.5, the factory setting.
- If you change the shutter speed or you press PROGRAM AE button, ► disappears from the viewfinder and you cannot adjust the sound level. To adjust, press REC LEVEL again to display ► in the viewfinder.
- Though the DV recording system records two stereo sounds to stereo 1 and 2, this camcorder records the sound to stereo 1 only. You can adjust the play back sound balance between stereo 1 and 2 (p. 22).
- Sound level also appears at the lower right in the display window. For example, when 7.0 appears in the viewfinder, 7 appears in the display window, and when 7.5 appears in the viewfinder, 7 appears in the display window (the decimal point represents 0.5).

Releasing the Steady Shot Function

When you shoot, the  indicator appears in the viewfinder. This indicates that the Steady Shot function is working and the camcorder compensates for camera-shake.

- (1) Slide OPEN and open the battery cover.
- (2) Set STEADY SHOT to OFF so that the  indicator disappears.











To activate the Steady Shot function again
Set STEADY SHOT to ON to display the  indicator.

Notes on the Steady Shot function

- The Steady Shot function will not correct excessive camera-shake.
- The Steady Shot function becomes less effective when using a teleconversion lens (not supplied) or wide teleconversion lens (not supplied).

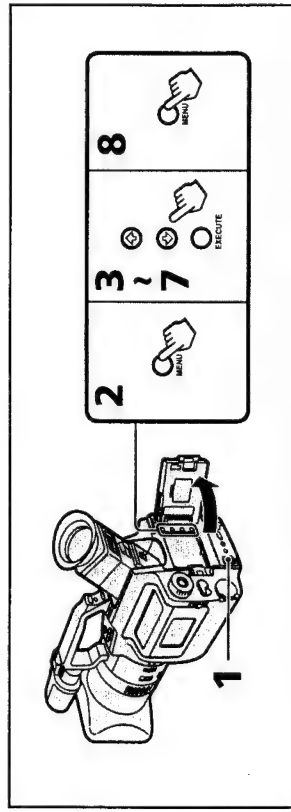
Presetting the Adjustment for Picture Quality

You can preset the camcorder to record the picture with the desired picture quality. When presetting, adjust the picture by shooting a subject and checking the picture displayed on a TV using the menu system.

- (1) Slide OPEN and open the battery cover while the camcorder is in Standby mode.
- (2) Press MENU to display the menu in the viewfinder.
- (3) Press  or  to select CUSTOM, then press EXECUTE. The custom mode menu appears.
- (4) Press  to select SET, then press EXECUTE.
- (5) Press  to select ON, then press EXECUTE.
- (6) Press  or  to select the desired item, then press EXECUTE.
- (7) Press  or  to adjust the selected mode, then press EXECUTE.

Item	Function to adjust the	Adjustment value
COLOR LV	color intensity	Decreases color intensity ↔ Increases color intensity
SHARPNESS	sharpness	Softer ↔ Sharper
WB SHIFT	white balance	Bluish ↔ Reddish
AE SHIFT	brightness	Darker ↔ Brighter
GAINSHIFT	gain-shift	0dB/-3dB






- (8) Press MENU to erase the menu display.



Note on adjustment of each item

Make sure to shoot the appropriate subject for the item you want to preset.

To record with the preset setting

- 1 Press MENU while the camcorder is in Standby mode.
- 2 Press  or  to select CUSTOM, then press EXECUTE.
- 3 Press  to select SET, then press EXECUTE.
- 4 Press  to select ON, then press EXECUTE.
- 5 Press MENU to display  in the viewfinder.

Presetting the Adjustment for Picture Quality

To record without the preset setting

- 1 Press MENU while the camcorder is in Standby mode.
- 2 Press \uparrow or \downarrow to select CUSTOM, then press EXECUTE.
- 3 Press \uparrow to select SET, then press EXECUTE.
- 4 Press \downarrow to select OFF, then press EXECUTE.
[CP] goes off in the viewfinder.

To return to the standard setting

- 1 Press MENU while the camcorder is in Standby mode.
- 2 Press \uparrow or \downarrow to select CUSTOM, then press EXECUTE.
- 3 Press \uparrow to select SET, then press EXECUTE.
- 4 Press \downarrow to select RESET, then press EXECUTE.
[CP] goes off in the viewfinder.

Checking the Custom Preset Setting

You can display and check the custom preset setting in the viewfinder while recording.

Press CP CHECK located on the top of the camcorder while the camcorder is in Standby mode or recording.

Custom preset setting appears in the viewfinder.

About the gain-shift setting

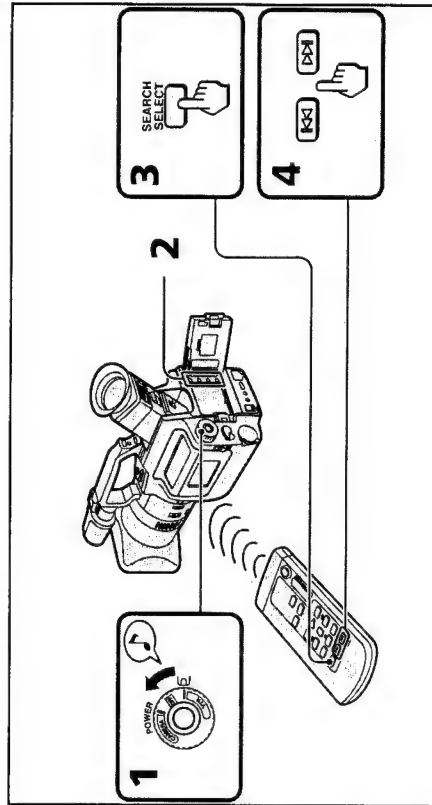
Use the gain-shift function when you shoot under bright conditions. It adjusts the gain as close as -3 dB automatically. The gain-shift function does not work when you shoot under dark conditions.

Searching the Recorded Picture

When you use a cassette memory-mounted mini DV cassette which can store the recorded date or time, etc., you can search the recorded picture with the date or time using the Remote Commander (Cassette memory search). You can also search the photo-recorded pictures only, or the recorded picture in the backward and forward direction from the present position without cassette memory.

Searching the recorded picture with the date or time - Cassette memory search

- (1) Turn the POWER switch to VTR.
- (2) Set SEARCH to C MEMORY in the menu system.
- (3) Press SEARCH SELECT on the Remote Commander to select date search (search with the date) or photo search (search the photo-recorded pictures only).
- (4) Press \triangleright or \triangleleft for upward or \triangleright or \triangleleft for downward on the Remote Commander to select the desired picture.
Cassette memory search starts.



About the cassette memory search

You can search up to 6 days for date search and 43 pictures for photo search when you use the 4K-bit cassette memory.

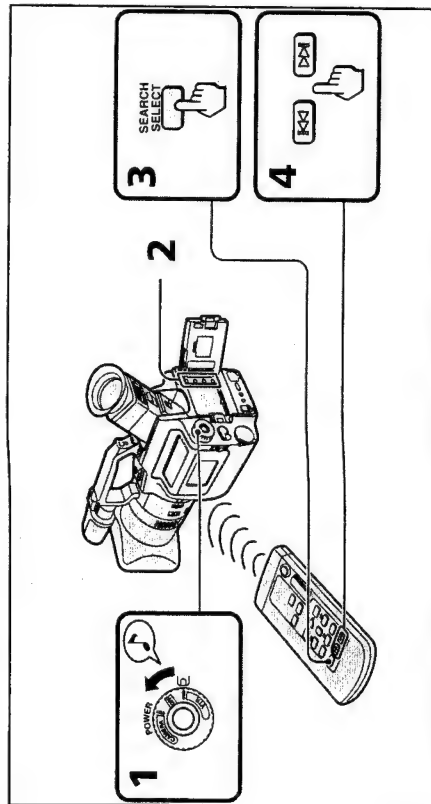
Note on the cassette memory search

You cannot use cassette memory search function even if you set the SEARCH to C MEMORY in the menu system, when you use a mini DV cassette lacking the cassette memory.

Searching the Recorded Picture

Searching the recorded picture without using cassette memory

- (1) Turn the POWER switch to VTR.
 - (2) Set the SEARCH to OFF in the menu system.
 - (3) Press SEARCH SELECT on the Remote Commander to select DATE or PHOTO.
 - (4) Press \lll for backward or \ggg for forward on the Remote Commander to select the desired picture.
- Each time you press \lll or \ggg , the camcorder searches for the next scene.



To stop searching

Press \square STOP.

Notes on searching

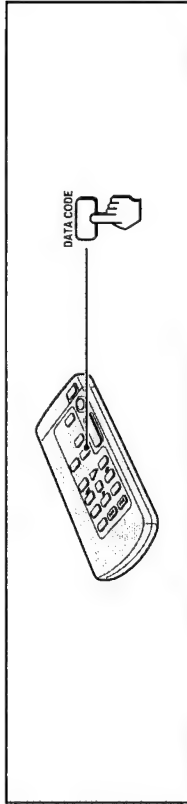
- The camcorder may not search for the recorded picture correctly if the recorded tape has blank portions between pictures.
- Be sure to install the lithium battery when you use the cassette with cassette memory.
- The camcorder may not search if the beginning of the search portion is too close to the tape head position.
- When you use date search, the camcorder plays back the search picture, and when you use photo search, the camcorder enters playback pause at the point.

Checking the Information for the Recorded Picture

You can display the recorded date and time or the various settings in the viewfinder while playing back the tape.

Press DATA CODE on the Remote Commander while playing back. Each time you press the button, the indicator changes: recorded date and time → various settings → No indication, cyclically in the viewfinder.

Press DATA CODE again to erase the display.



"--:--:--" appears when

- the camcorder can't read the data code because of a damaged tape or noise.
- the tape was recorded without setting the date and time.

Editing onto Another Tape

You can create your own video program by editing with any other DV, mini DV, Hi8, Hi8 Hi8, VHS, S-VHS, Hi-Fi VHS, S-VHS, Hi-Fi VHS, or ED Beta VCR that has video/audio inputs.

Before Editing

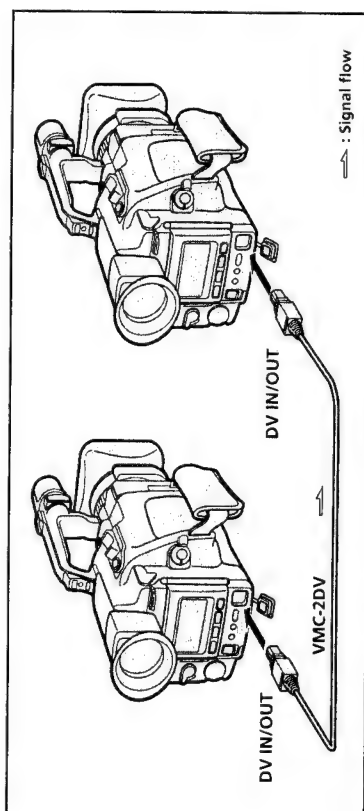
Connect the camcorder to the VCR using the supplied A/V connecting cable (page 15) or the DV connecting cable (not supplied). Use this camcorder as a player.

Using the A/V connecting cable

Set the input selector on the VCR to LINE.

Using the DV connecting cable

Simply connect the DV connecting cable to DV IN/OUT and DV products to DV IN.



About DV connecting cable

You can record picture, sound and system data at the same time on the DV products by using the DV connecting cable only.

Starting Editing

- (1)** Insert a blank tape (or a tape you want to record over) into the recording VCR. Then insert your recorded tape into the camcorder.
- (2)** Play back the recorded tape on the camcorder until you locate the point where you want to start editing. Then set the camcorder to playback pause mode.
- (3)** Set the recording VCR to recording pause mode.
- (4)** Press **II** on the camcorder and VCR simultaneously to start editing.

To Edit More Scenes

Repeat steps 2 to 4.

To Stop Editing

Press STOP ☐ on the camcorder and VCR.

Note on editing when using the A/V connecting cable

Press **DISPLAY** on the Remote Commander while editing onto another tape to turn off the display indicators. Otherwise, the indicators will be recorded on the tape.

If your VCR is a monaural type

Connect only the white plug for audio on both the camcorder and the VCR. With this connection, the sound is monaural.

For fine synchro-editing function

You can edit precisely by connecting a control cable to the LANC jack of this camcorder and other video equipment having fine synchro-editing function, using this camcorder as a player.

Notes on editing when using the DV connecting cable

- You can connect one VCR only.
- Connect the LANC jacks when controlling this camcorder from an other VCR for editing.
- If you record playback pause picture via the DV jack, the recorded picture becomes rough.
- You can use this camcorder as a recorder. In this case, you do not need to change the connection since the direction of signal flow changes automatically, but check that "DV IN" appears on the TV and/or viewfinder.

Replacing Recording on a Tape

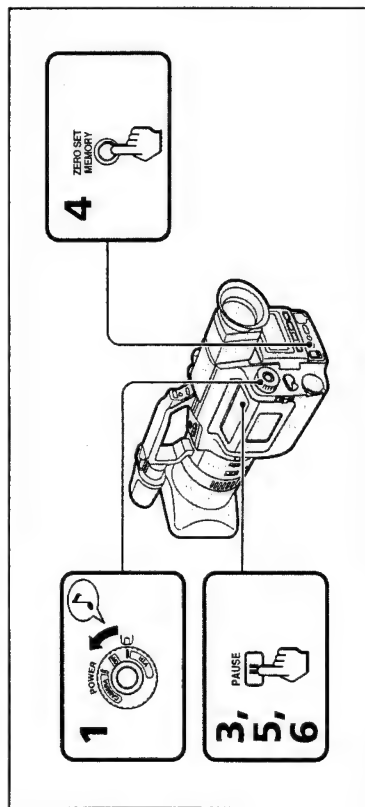
You can insert a new picture, sound, recording date/time, camera information, etc., from a VCR onto your originally recorded tape by specifying and ending points.

Connection is the same as in "Using the DV connecting cable" on page 54. Refer to the instruction manual of the connected equipment also.

- (1) Turn the POWER switch to VTR.
- (2) Search for the start point to be inserted on the VCR, then set the VCR to playback pause mode.
- (3) Search for the point where you want to end insert editing, then set the camcorder to playback pause mode.

It is convenient to use the EDITSEARCH button (p. 14).

- (4) Press ZERO SET MEMORY. The counter is reset to zero (0:00:00:00).
- (5) Search for the point where you want to start editing, then set the camcorder to recording pause mode.
- (6) Press II on the camcorder and the VCR simultaneously to start editing. The editing starts and new scene is inserted on the recorded tape. The editing stops automatically near the counter zero point (0:00:00:00).



To change the end point

Press ZERO SET MEMORY after step 5 to go off the ZERO SET MEMORY indicator, then repeat from step 2.

To stop editing

Press □STOP to go off the ZERO SET MEMORY indicator.

About editing

You can start editing without setting the end point. Instead of steps 3 and 4, press □STOP at the desired end point.

Notes on editing

- You cannot edit with the equipment which is not connected to DV connector.
- The previous recorded scene is erased when editing starts.
- The picture may be distorted at the end of the inserted portion when it is played back.

Additional Information

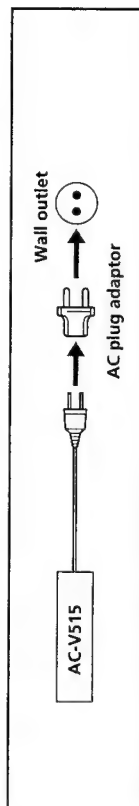
Using Your Camcorder Abroad

Each country has its own electricity and TV color systems. Before using your camcorder abroad, check the following points:

Power Sources

You can use your camcorder in any country with the supplied AC power adaptor within 100 V to 240 V AC, 50/60 Hz.

Use a commercially available AC plug adaptor, if necessary, depending on the design of the wall outlet.



Difference in Color Systems

This camcorder is an NTSC system-based camcorder. If you want to view the playback picture on a TV, it must be an NTSC system based TV. Check the following alphabetical list.

NTSC system countries

Bahama Islands, Bolivia, Canada, Central America, Chile, Colombia, Ecuador, Jamaica, Japan, Korea, Mexico, Peru, Surinam, Taiwan, the Philippines, the U.S.A., Venezuela, etc.

PAL system countries

Australia, Austria, Belgium, China, Denmark, Finland, Germany, Great Britain, Holland, Hong Kong, Italy, Kuwait, Malaysia, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, Thailand, etc.

PAL M system country

Brazil

PAL N system countries

Argentina, Paraguay, Uruguay

SECAM system countries

Bulgaria, Czech Republic, France, Guyana, Hungary, Iran, Iraq, Monaco, Poland, Russia, Slovak Republic, Ukraine, etc.

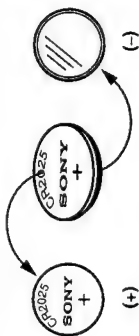
Replacing the Lithium Battery in the Camcorder

Your camcorder is supplied with the lithium battery installed. When the battery becomes weak or dead, the indicator flashes in the viewfinder for about 5 seconds when you set the POWER switch to CAMERA. In this case, **replace the battery with the Sony CR2025 or Duracell DL-2025 lithium battery. Use of another battery may present a risk of fire or explosion.** The lithium battery installed at the factory may not last 1 year.



Note on Lithium Battery

Note that the lithium battery has a positive (+) and a negative (-) terminals as illustrated. **Be sure to install the lithium battery so that terminals on the battery match the terminals on the camcorder.**



WARNING

The battery may explode if mistreated. Do not recharge, disassemble, or dispose of in fire.

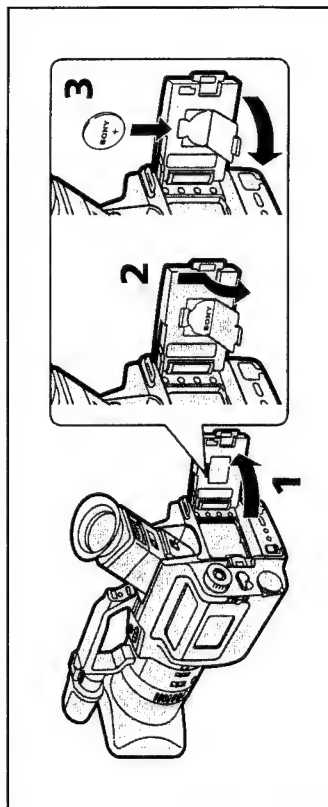
Caution

Keep the lithium battery out of the reach of children. Should the battery be swallowed, consult a doctor immediately.

Replacing the Lithium Battery

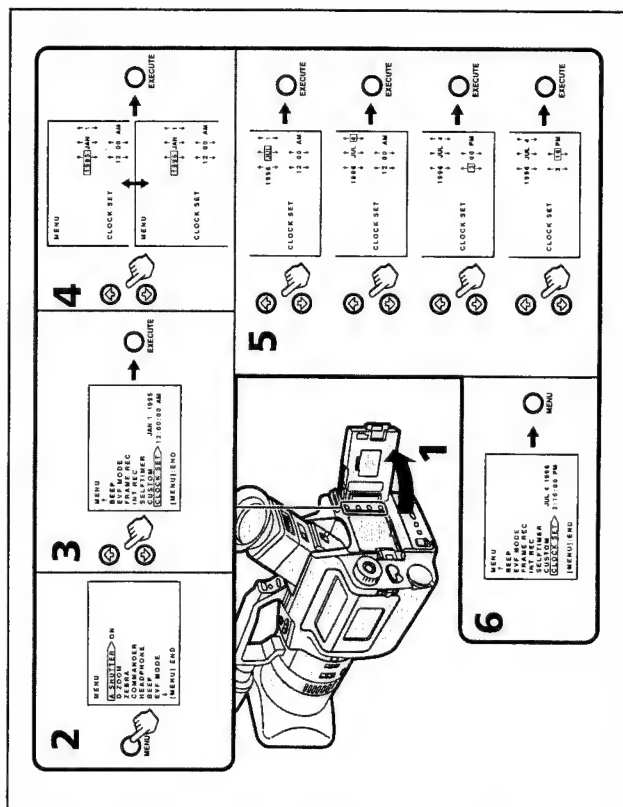
When replacing the lithium battery, keep the battery pack or other power source attached. Otherwise, you will need to reset the date and time.

- (1) Slide OPEN and open the battery cover.
- (2) Push the battery down once and pull it out from the holder.
- (3) Install the lithium battery with the positive (+) side facing out. Close the battery cover.



Resetting the Date and Time

- You can reset the date or time in the menu system.
- (1) Slide OPEN and open the battery cover.
 - (2) Press MENU to display the menu in the viewfinder.
 - (3) Select CLOCK SET, then press EXECUTE.
 - (4) Press \blacktriangle or \blacktriangledown to adjust the year, and then press EXECUTE.
 - (5) Using \blacktriangle , \blacktriangledown and EXECUTE as step 4, adjust the month, day, hour and minutes. Note that when you hold down \blacktriangle or \blacktriangledown the indications in the menu display advance faster.
 - (6) Press MENU to erase the menu display.



The year indicator changes as follows:

1995 → 1996 → ... → 2025 → 1995

Note on the time indicator

The internal clock of the camcorder operates on a 12-hour cycle. 12:00:00 AM stands for midnight. 12:00:00 PM stands for noon.

Usable Cassettes and Recording/Playback Modes

You can use the mini DV cassette only. You cannot use any other 8 mm, Hi8, Hi8 VHS, S-VHS, S-VHS, Hi8 VHS, S-VHS, S-VHS, ED Beta cassette.

When You Play Back

You can play back the sound recorded in any audio mode. To get the higher quality pictures of the DV format, connect the camcorder to the TV using the S video cable.

Using this camcorder, you cannot play back a tape that has recorded a copyright control signals for copyright protection of software. "COPY INHIBIT" appears on the TV or in the viewfinder if you try to play back such a tape. This camcorder does not record copyright control signals on the tape when it records.

When You Record

You cannot use this camcorder and the DV connecting cable to copy a tape that has recorded the copyright control signals for copyright protection of software. "COPY INHIBIT" appears on the TV or in the viewfinder if the play back signal of such a tape is input to this camcorder.

We recommend to use an ME cassette

You can get the highest quality pictures with this camcorder using an ME cassette which is the highest quality cassette. You may not get as good quality with lesser quality cassettes.

Tips for Using the Battery Pack

This section shows you how you can get the most out of your battery pack.

Preparing the Battery Pack

Always Carry Additional Batteries

Have sufficient battery pack power to do 2 to 3 times as much recording as you have planned.

Battery Life is Shorter in Cold Environment

Battery efficiency is decreased and the battery will be used up more quickly if you are recording in cold environment.

To Save Battery Power

Turn the **STANDBY** switch on the camcorder down when not recording to save battery power [a]. A smooth transition between scenes can be made even if recording is stopped and started again. While positioning the subject, selecting an angle, or looking at the viewfinder, the lens moves automatically and the battery is used. The battery is also used when a cassette is inserted or removed.

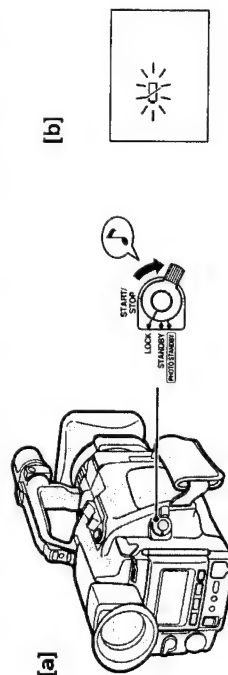
When to Replace the Battery Pack

While you are using your camcorder, the remaining battery indicator decreases gradually as battery power is used up.



When the remaining battery indicator reaches the lowest point, the **CS** indicator appears and starts flashing in the viewfinder. [b]

When the **CS** indicator in the viewfinder changes from slow flashing to rapid flashing while you are recording, set the **POWER** switch to **OFF** on the camcorder and replace the battery pack. Leave the tape in the camcorder to obtain smooth transition between scenes after the battery pack is replaced.



Notes on the Rechargeable Battery Pack

Caution

Never leave the battery pack under temperatures above 140 °F (60 °C), such as in a car parked in the sun or under direct sunlight.

The Battery Heats Up

During charging or recording, the battery pack heats up. This is caused by energy that has been generated and a chemical change that has occurred inside the battery pack. This is not cause for concern.

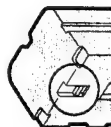
Battery Care

- Remove the battery pack from the camcorder after using the battery pack, and keep it in a cool place. When the battery pack is attached to the camcorder, a small amount of current flows to the camcorder even if the **POWER** switch is set to **OFF**, which shortens battery life.
- The battery pack is always discharging even when it is not in use after charging. Therefore, you should charge the battery right before using the camcorder.

The Switch on the Battery Pack

This switch is provided to help you remember the charging status of the battery. Set the switch to the "green mark" position after charging. (When detached from the Charge adaptor, the switch exposes the green mark. When detached from your camcorder, no mark is indicated.) [c]

[c]



The Life of the Battery Pack

If the **CS** indicator flashes rapidly just after turning on the camcorder with a fully charged battery pack, the battery pack should be replaced with a new fully charged one.

Charging Temperature

You should charge batteries at temperatures from 50°F to 86°F (from 10°C to 30°C). Lower temperatures require a longer charging time.

Notes on Charging

A Brand-new Battery

A brand-new battery pack is not charged. Before using the battery pack, charge it completely.

Recharge the Battery Pack Whenever You Like

You do not have to discharge it before recharging. If you charged the battery pack fully but you did not use it or a long time, it becomes discharged. So recharge the battery pack before use.

Notes on the Terminals

Keep the Terminals Clean

If a foreign object comes into the terminals, remove it with a soft stick and repeat installing and removing the battery pack. This improves the contact condition.

Be Sure to Observe the Following



- Keep the battery pack away from fire.
- Keep the battery pack dry.
- Do not open nor convert the battery pack.
- Do not expose the battery pack to any mechanical shock.

Maintenance Information and Precautions

Moisture Condensation

If the camcorder is brought directly from a cold place to a warm place, moisture may condense inside the camcorder, on the surface of the tape, or on the lens. If this happens, the tape may stick to the head drum and be damaged or the camcorder may not operate correctly. To prevent possible damage under these circumstances, the camcorder is furnished with moisture sensors. However, take the following precautions.

Inside the Camcorder



When  and  indicators flash in the viewfinder, moisture has condensed inside the camcorder. If this happens, none of the functions except cassette ejection will work.

Eject the cassette, turn off the camcorder, and leave it with the cassette compartment open for about 1 hour.


If the  indicator does not light up when you turn on the power, you can use the camcorder again.



On the Surface of the Tape

If there is moisture on the surface of the tape, when you insert cassette and press a tape transport button (PLAY, etc.), the  indicator flashes in the viewfinder. If this happens, none of the functions except cassette ejection will work.

Eject the cassette and leave it for about 1 hour.

If the  indicator does not light up when you insert the cassette and press a tape transport button, you can use the camcorder again.

On the Lens

No indicator will appear, but the picture becomes dim. Turn off the power and do not use the camcorder for about 1 hour.

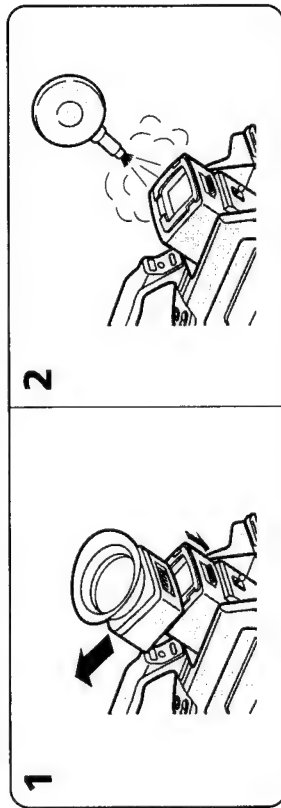
How to Prevent Moisture Condensation

When bringing the camcorder from a cold place to a warm place, put the camcorder in a plastic bag and allow it to adapt to room conditions over a period of time.

- (1) Be sure to tightly seal the plastic bag containing the camcorder.
- (2) Remove the bag when the air temperature inside it has reached the temperature surrounding it (after about 1 hour).

Removing Dust from Inside the Viewfinder


- (1) While holding down the hook, slide the eyecup in the direction of the arrow and remove it out.
- (2) Clean the surface with a commercially available blower.



To reattach the eyecup

Do step 1 above sliding the eyecup in the reverse direction of the arrow.

Video Head Cleaning

To ensure normal recording and clear pictures, clean the video heads often. When the  indicator flashes in the viewfinder or mosaic noise appears on the playback picture or part of the picture remains, the video heads may be dirty.



[a] Slight contamination

[b] Critical contamination

If this happens, clean the video heads with the Sony DVM12CL cleaning cassette (not supplied). After checking the picture, if it is still "noisy", repeat the cleaning. (Do not repeat cleaning more than 5 times.)

Caution

Do not use a commercially available wet-type cleaning cassette. It may damage the video heads.

Note

If the DVM12CL (not supplied) cleaning cassette is not available in your area, consult your nearest Sony dealer.

Maintenance Information and Precautions

Precautions

Camcorder Operation

- Operate the camcorder using 7.2 V (battery pack), or 6.5 V (AC power adaptor).
- For DC or AC operation, use only the accessories recommended in this manual.
- Should any solid object or liquid fall into the casing, unplug the camcorder and have it checked by your nearest Sony dealer before operating it any further.
- Avoid rough handling or mechanical shock. Be particularly careful of the lens.
- Keep the POWER switch set to OFF when not using the camera.
- Do not wrap up the camcorder and operate it since heat may build up internally.
- Keep the camcorder away from strong magnetic fields or mechanical vibration.

On Handling Tapes

- Do not insert anything into the small holes on the cassette.
- Do not open the tape protect cover or touch the tape.
- Avoid touching or damaging the terminals. To remove dust, clean the terminals with a soft cloth.

Camcorder Care

- When the camcorder is not to be used for a long time, disconnect the power source and remove the cassette. Periodically turn on the power, operate the CAMERA and VTR sections and play back a tape for about 3 minutes.
- Clean the camcorder body with a soft dry cloth, or a soft cloth lightly moistened with a mild detergent solution. Do not use any type of solvent which may damage the finish.

AC Power Adaptor Charging

- Use only a lithium ion type battery.
- Charge the battery on a flat place without vibration.
- The battery will get hot during charging. However, this is normal.

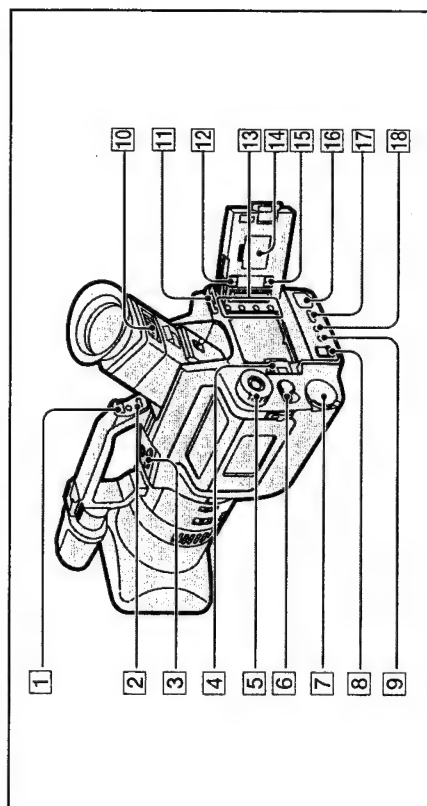
Others

- Unplug the unit from the wall outlet when not in use for a long time. To disconnect the cord, pull it out by the plug. Never pull the cord itself.
- Do not operate the unit with a damaged cord or if the unit has been dropped or damaged.
- Do not bend the AC power cord forcibly, or put a heavy object on it. This will damage the cord and may cause a fire or an electrical shock.
- Be sure that nothing metallic comes into contact with the metal parts of the connecting plate. If this happens, a short may occur and the unit may be damaged.
- Always keep the metal contacts clean.
- Do not disassemble the unit.
- Do not apply mechanical shock or drop the unit.
- While the unit is in use, particularly during charging, keep it away from AM receivers and video equipment because it will disturb AM reception and video operation.
- The unit becomes warm while in use. This is normal.
- Do not place the unit in locations that are:
 - Extremely hot or cold
 - Dusty or dirty
 - Very humid
 - Vibrating

If any difficulty should arise, unplug the unit and contact your nearest Sony dealer.

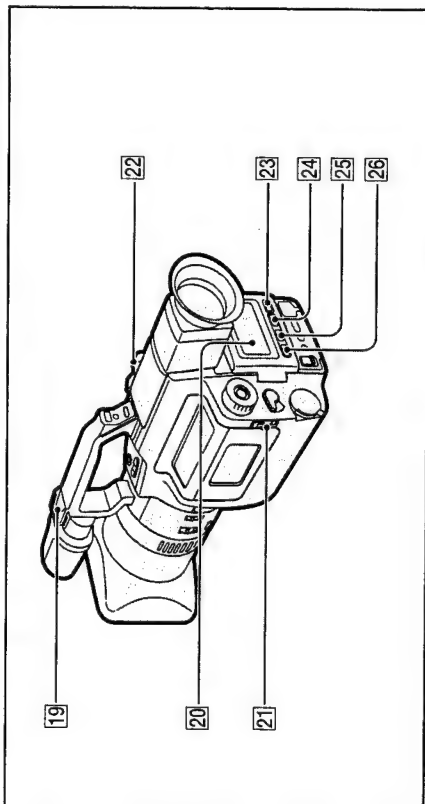
Identifying the Parts

Camcorder

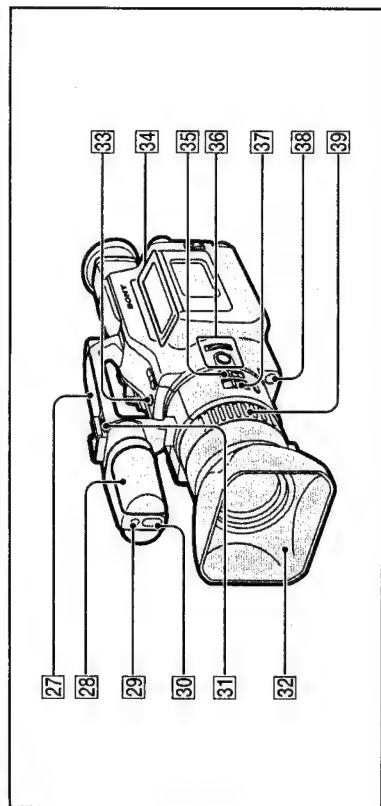


- 1 Remote sensor (p. 78)
- 2 CP CHECK button (p. 49)
- 3 EDIT/SEARCH buttons (p. 14)
- 4 RELEASE knob (p. 8)
- 5 POWER switch (p. 10)
- 6 HOLD/AUTO LOCK selector (p. 31)
- 7 CONTROL dial (p. 34)
- 8 OPEN knob (p. 7)
- 9 ZERO SET MEMORY button (p. 25)
- 10 Viewfinder lens adjustment ring (p. 11)
- 11 Hooks for shoulder strap (p. 75)
- 12 STEADY SHOT switch (p. 48)
- 13 Menu operation buttons (p. 20)
- 14 Lithium battery cover (p. 59)
- 15 DIGITAL MODE switch (p. 24)
- 16 DV IN/OUT jack (p. 54)
- 17 (one push white balance) button (p. 43)
- 18 SELF TIMER button (p. 30)

Identifying the Parts

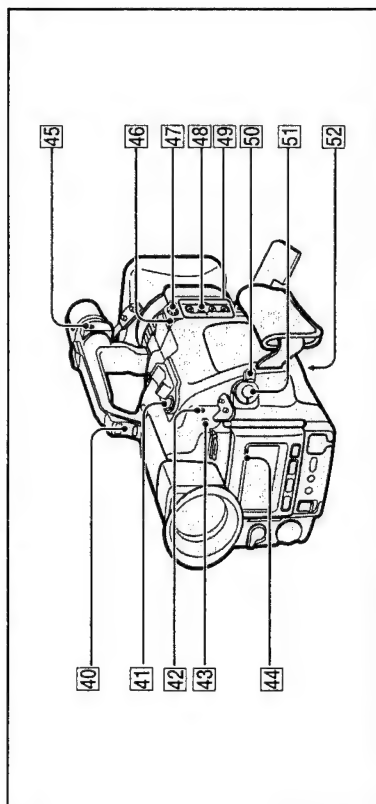


- 19 Accessory shoe
- 20 Display window (p. 80)
- 21 EJECT switch (p. 9)
- 22 Zoom button (p. 12)
- 23 REC LEVEL (recording level) button (p. 46)
- 24 WHT BAL (white balance) button (p. 43)
- 25 SHUTTER SPEED button (p. 40)
- 26 PROGRAM AE button (p. 34)



- 27 Carrying handle
- 28 Microphone
- 29 Camera recording lamp
- 30 Remote sensor (p. 78)
- 31 Hooks for shoulder strap (p. 75)
- 32 Lens hood
You can attach a wide teleconversion lens (not supplied) by removing the lens hood.
- 33 REC START/STOP button for low-position recording (p. 13)
- 34 Tape transport buttons (p. 16)
◀◀II/III>> FRAME (direction select/frame-by-frame), ▶▶SLOW (slow speed playback),
●REC (DV IN) (recording using DV IN connector), □STOP, ◀◀REW (rewind), ▷▶PLAY
(playback), ▶▶FF (fast-forward), II PAUSE
- 35 ND FILTER switch (p. 41)
- 36 EXPOSURE button and dial (p. 38)
- 37 FOCUS switch and PUSH AUTO button (p. 32)
- 38 FADER/OVERLAP button (p. 23)
- 39 Focus ring (p. 32)

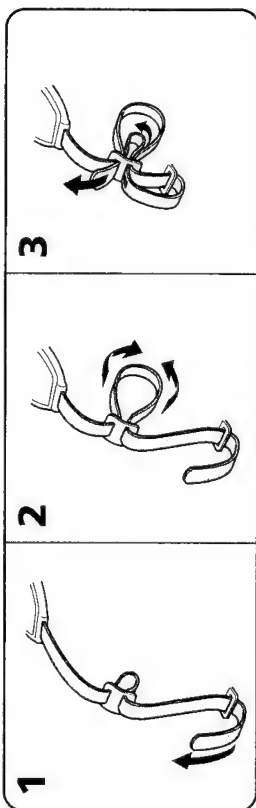
Identifying the Parts



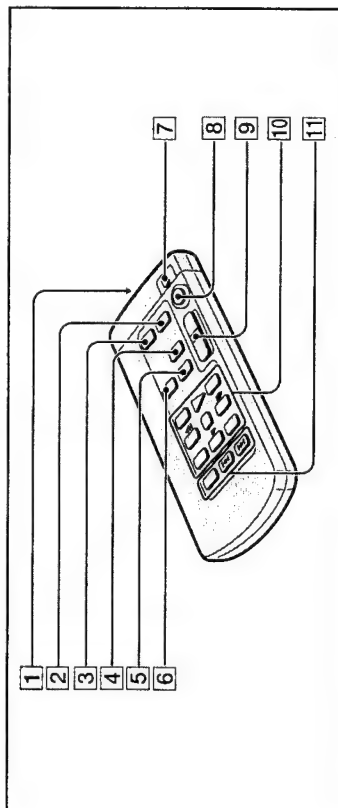
- 40 Camera recording lamp
- 41 PHOTO button (p. 27)
- 42 **CLANC** control jack
CL stands for Local Application Control Bus System. The CLANC control jack is used for controlling the tape transport of video equipment and peripherals connected to it. This jack has the same function as the jack indicated as CONTROL L or REMOTE. When using the tripod VCT-750RM/950RM/R630RM, disconnect the cable from CLANC control jack after you finish recording.
- 43 **⌂** (headphones) jack (p. 16)
- 44 PEAK lamp
- 45 MIC (PLUG IN POWER) jack
Connect an external microphone (not supplied). This jack also accepts a "plug-in-power" microphone.
- 46 DC IN jack (p. 18)
- 47 S VIDEO output jack (p. 15)
- 48 RFU DC OUT (p. 15)
- 49 Audio/Video output jack (p. 15)
- 50 Standby selector (p. 10)
- 51 START/STOP button (p. 10)
- 52 Tripod receptacle (p. 13)

Attaching the shoulder strap

Attach the supplied shoulder strap to the hooks for the shoulder strap (11) and 31 on page 71 and 73).



Remote Commander



- 1 **Transmitter**
Point toward the remote sensor to control the camcorder after turning on the POWER switch on the camcorder.
- 2 **PRINT** button (p. 27)
- 3 **PHOTO** button (p. 27)
- 4 **ZERO SET MEMORY** button (p. 25)
- 5 **DATA CODE** button (p. 53)
- 6 **DISPLAY** button (p. 17)
- 7 **VTR4/ID/HOLD selector** (p. 77)
Select VTR4 or ID, the same setting as COMMANDER in the menu system. Select HOLD to prevent the buttons from being accidentally pressed.
- 8 **START/STOP** button
- 9 **Zoom** button
The zooming speed is unchangeable on the Remote Commander.

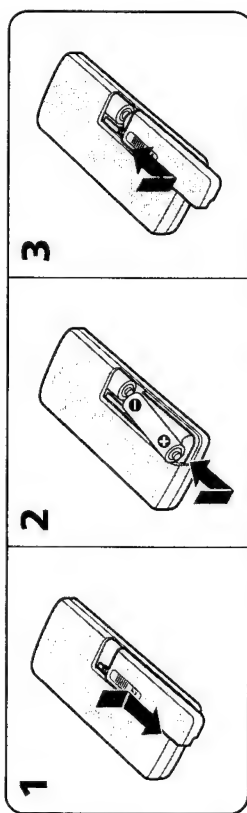
Identifying the Parts

- Tape transport buttons (p. 16)**
 ◀REW (rewind), ▷PLAY (playback), ▶▶FF (fast-forward), □STOP, ◀II/II▶ (frame-by-frame),
 II▶PAUSE, II▶SLOW (slow speed playback), x2 (double speed playback)
- SEARCH SELECT/II◀◀/II▶▶ buttons (p. 51)**

Preparing the Remote Commander

To use the Remote Commander, you must insert two size AA (R6) batteries. Use the supplied size AA (R6) batteries.

- (1) Remove the battery cover from the Remote Commander.
- (2) Insert both of the size AA (R6) batteries with correct polarity.
- (3) Put the battery cover back onto the Remote Commander.



To avoid damage from possible battery leakage
 Remove the batteries when you will not use the Remote Commander for a long time.

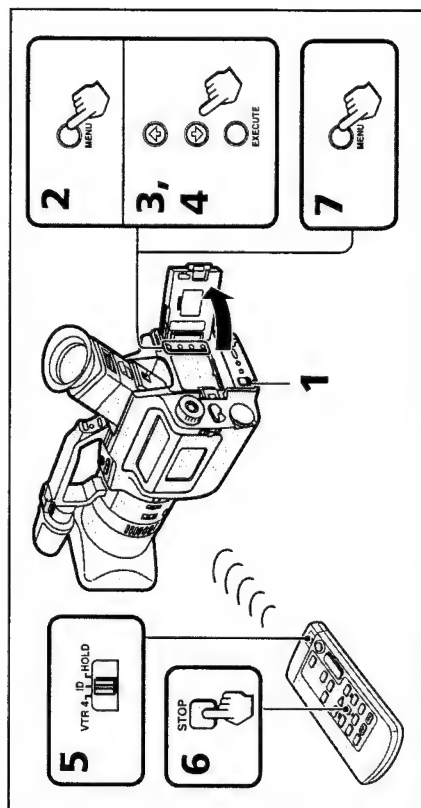
Using the Remote Commander

Make sure that the COMMANDER mode is not set to OFF in the menu system.

About the ID of the Remote Commander

You can avoid remote control misoperation from other VCRs by setting the VTR4/ID/HOLD selector to ID. Use the supplied Remote Commander when you set the VTR4/ID/HOLD selector to ID. When you use Remote Commander for the first time, you need to register the ID as shown below. Once you register the ID, you don't need to do again.

- (1) Slide OPEN and open the battery cover.
 - (2) Press MENU to display the menu in the viewfinder.
 - (3) Press ↑ or ↓ to select COMMANDER, then press EXECUTE.
 - (4) Press ↑ or ↓ to select ID SET.
 - (5) Set the VTR4/ID/HOLD selector on the Remote Commander to ID.
 - (6) Press STOP on the Remote Commander.
- After the beep sound, the ID of the Remote Commander is registered, and the COMMANDER is set to ID in the menu system.
- (7) Press MENU to erase the menu display.

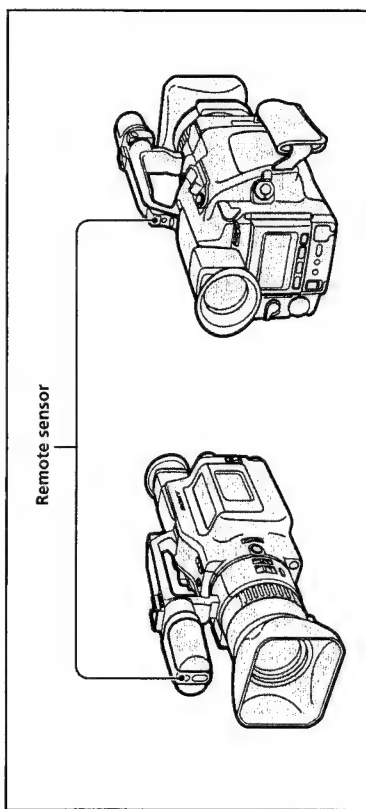


When the BEEP is set to OFF in the menu system
 The beep does not sound at step 6.

Identifying the Parts

Remote Control Direction

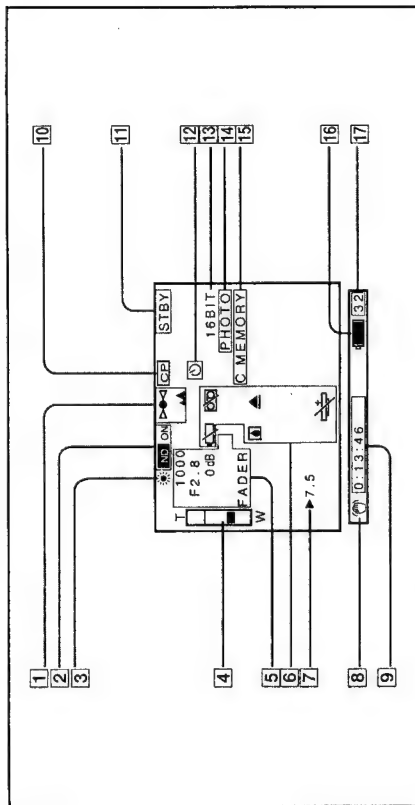
Aim the Remote Commander to the remote sensor. The operative range of the Remote Commander is about 5 m indoors. Depending on the angle, Remote Commander may not activate the camcorder.



Notes on the Remote Commander

- Keep the remote sensor away from strong light sources such as direct sunlight or illumination. Otherwise, the remote control may not be effective.
- Be sure that there is no obstacle between the remote sensor and the Remote Commander.
- This camcorder works at commander mode VTR 4 or ID. The commander modes (VTR 4 or ID) are used to distinguish this camcorder from other Sony VCRs to avoid remote control misoperation. If you use another Sony VCR at commander mode ID, we recommend you change the commander mode or cover the remote sensor of the VCR with black paper.
- You do not need to register the ID again once you have done so. Set the COMMANDER to ID in the menu system, and set the VTR4/ID/HOLD selector ID on the Remote Commander to ID.

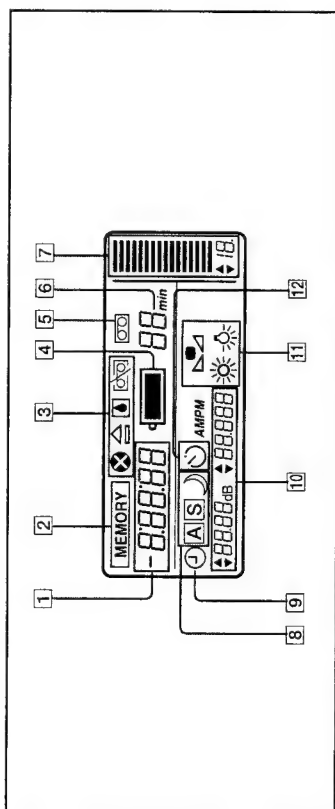
In the Viewfinder



- 1 Focus indicator (p. 32)
- 2 ND filter indicator (p. 41)
- 3 White balance indicator (p. 44)
- 4 Zoom indicator (p. 12)
- 5 PROGRAM AE mode/fading indicators (p. 23, 34)
- 6 Warning indicator (p. 81)
- 7 Recording sound level indicator (p. 46)
- 8 Steady shot indicator (p. 48)
- 9 Time code (p. 11)
- 10 Custom presetting (p. 50)
- 11 Tape transport mode
- 12 Self-timer indicator (p. 30)
- 13 Audio mode indicator (p. 82)
- 14 Photo recording indicators (p. 27)
- 15 Cassette memory indicator (p. 9)
- 16 Remaining battery indicator (p. 62)
- 17 Remaining tape indicator

Identifying the Parts

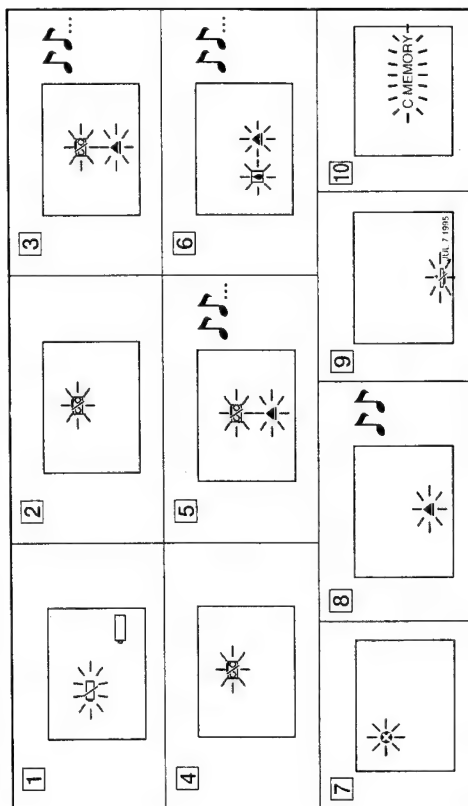
In the Display Window



- 1 Time code (p. 11)
- 2 MEMORY indicator (p. 25)
Same as ZERO SET MEMORY indicator in the viewfinder.
- 3 Warning indicators (p. 81)
- 4 Remaining battery indicator (p. 62)
- 5 Lights up while cassette is inserted
- 6 Remaining tape indicator
- 7 Sound volume (p. 46)
- 8 PROGRAM AE mode indicator (p. 34)
- 9 Lights up while displaying the date and time
- 10 Manual adjustment value/date and time
- 11 White balance indicators (p. 43)
- 12 Self-timer indicator (p. 30)

Warning Indicators

If indicators flash in the viewfinder or a caution lamp on the camcorder flashes, check the following:
 ♪: You can hear the beep sound when the BEEP is set to ON.



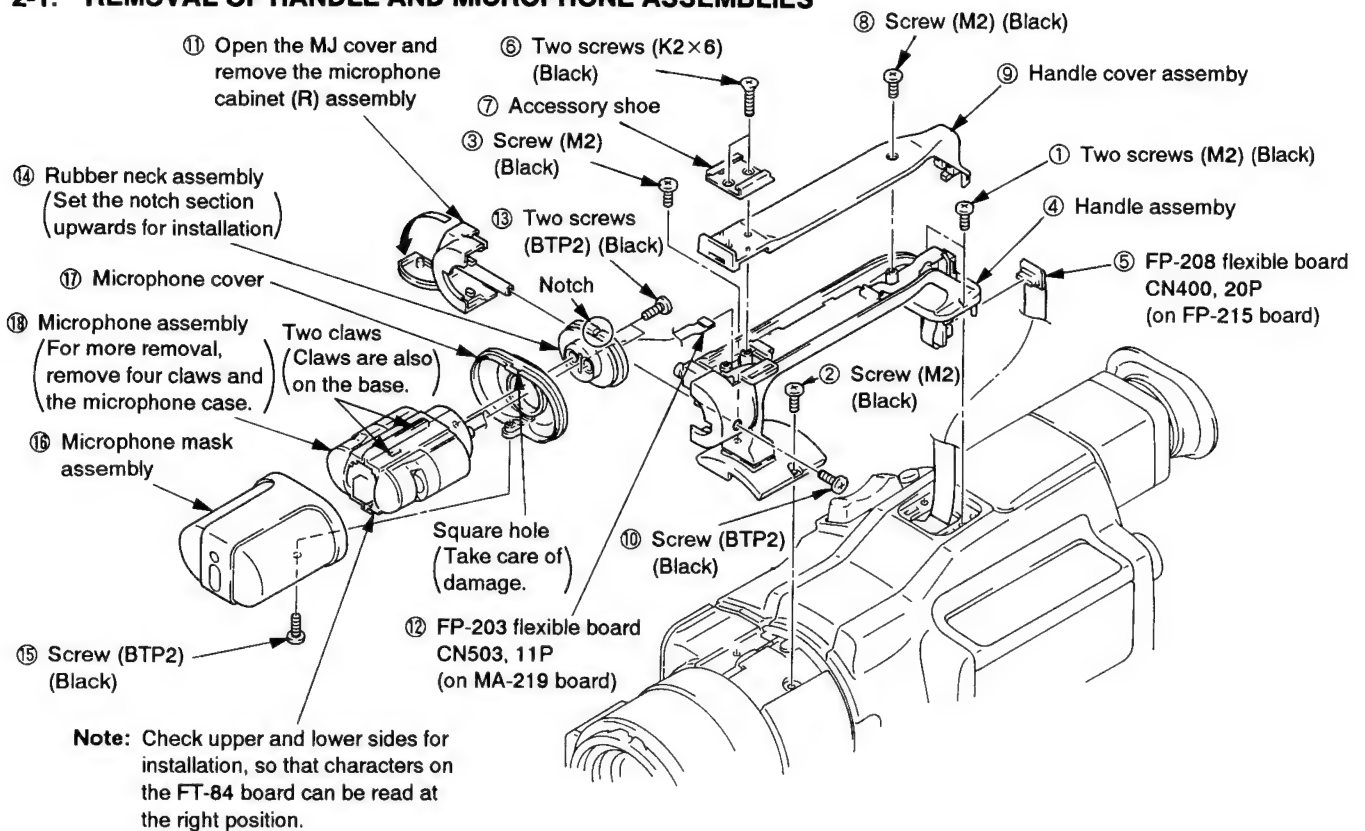
- 1 **Battery Remaining**
Slow flashing: The battery is weak.
Fast flashing: The battery is dead.
- 2 **The tape is near the end.**
- 3 **The tape has run out.**
- 4 **No tape has been inserted.**
- 5 **The tab on the tape is out (red).** (p. 9).
- 6 **Moisture condensation has occurred.** (p. 64).
- 7 **The video heads may be contaminated.** (p. 65).
- 8 **Some other trouble has occurred.**
Eject the cassette. If it remains lit, disconnect the power source and contact your Sony dealer or local authorized facility.
- 9 **The lithium battery is weak or the lithium battery is not installed.** (p. 58).
This indicator flashes five times when the power is turned on, then disappears.
- 10 **Updating the cassette memory data.** Use after C MEMORY indicator disappears.
The cassette compartment automatically lifts up and opens after the indicator disappears.

Additional Information

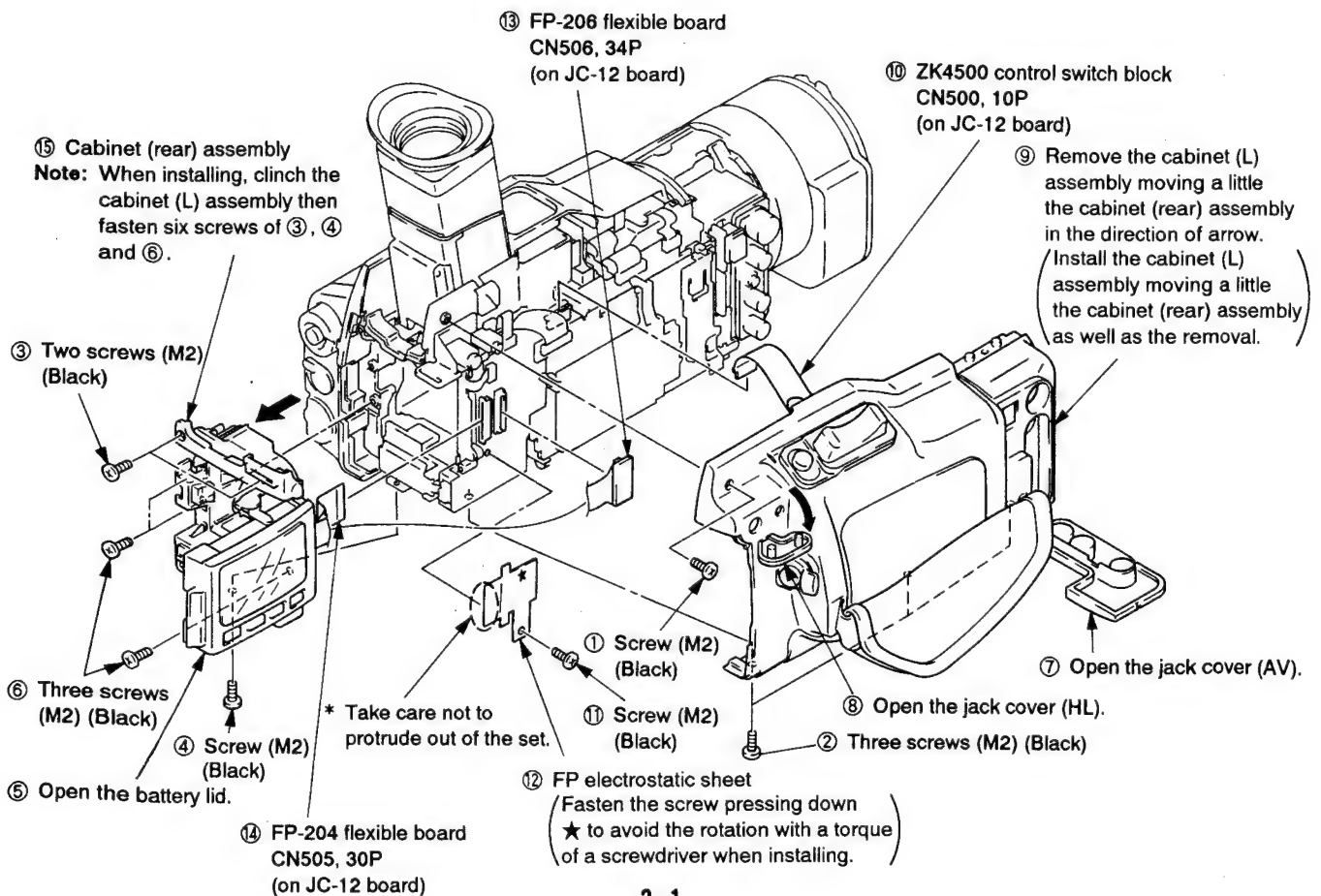
SECTION 2

DISASSEMBLY

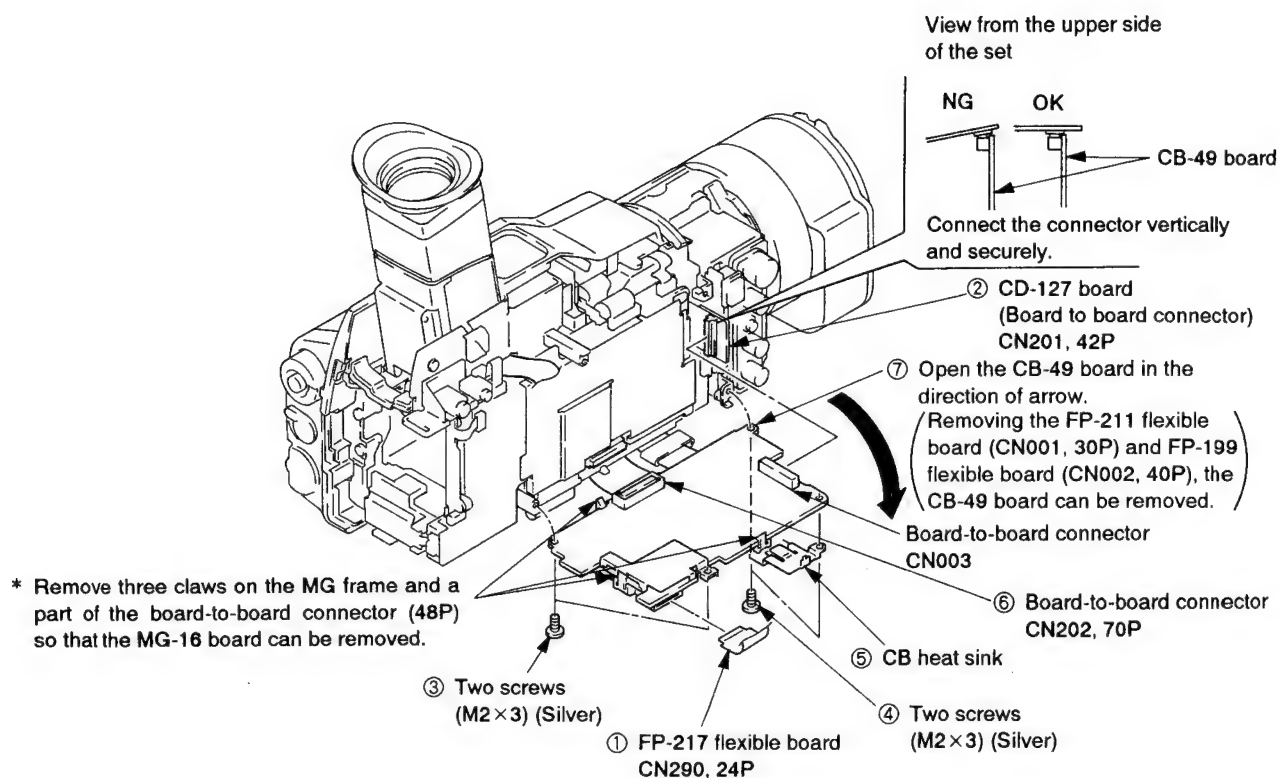
2-1. REMOVAL OF HANDLE AND MICROPHONE ASSEMBLIES



2-2. REMOVAL OF CABINET (L) AND (REAR) ASSEMBLIES

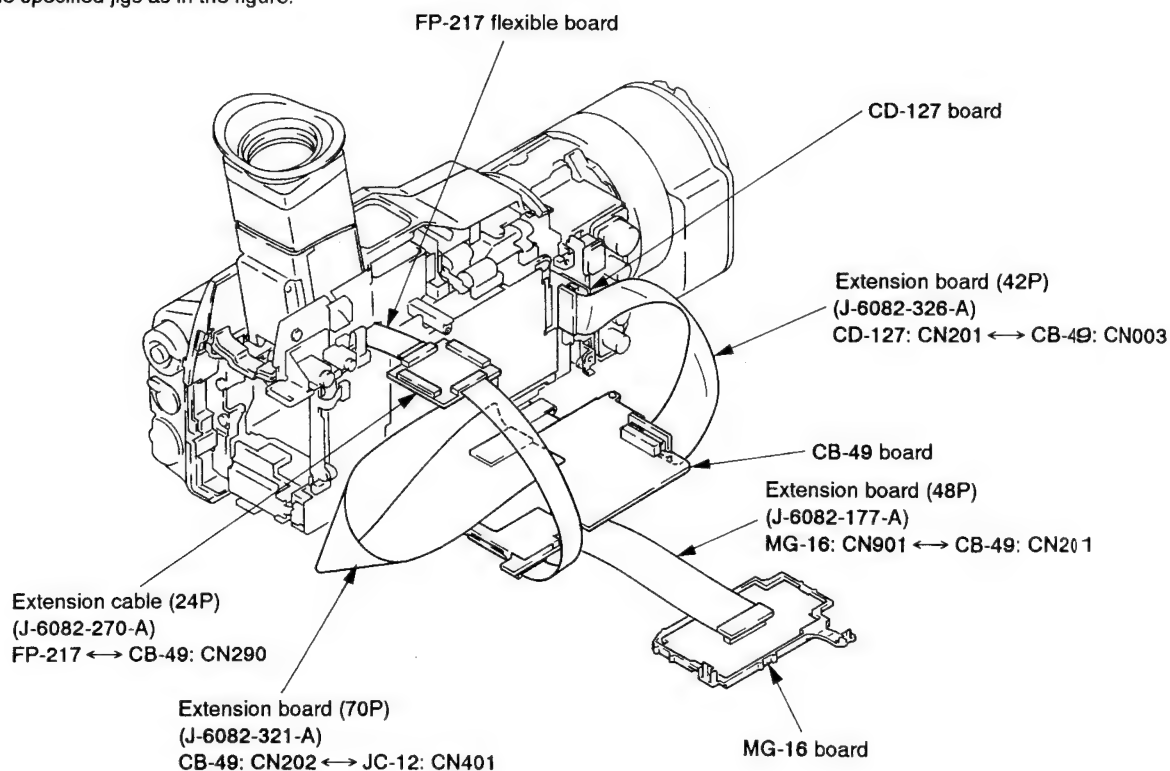


2-3. OPENING OF CB-49 BOARD



2-4. SERVICE POSITION OF CB-49 BOARD AND MG-16 BOARD (CHECK OR ADJUSTMENT OF THE CAMERA SYSTEM)

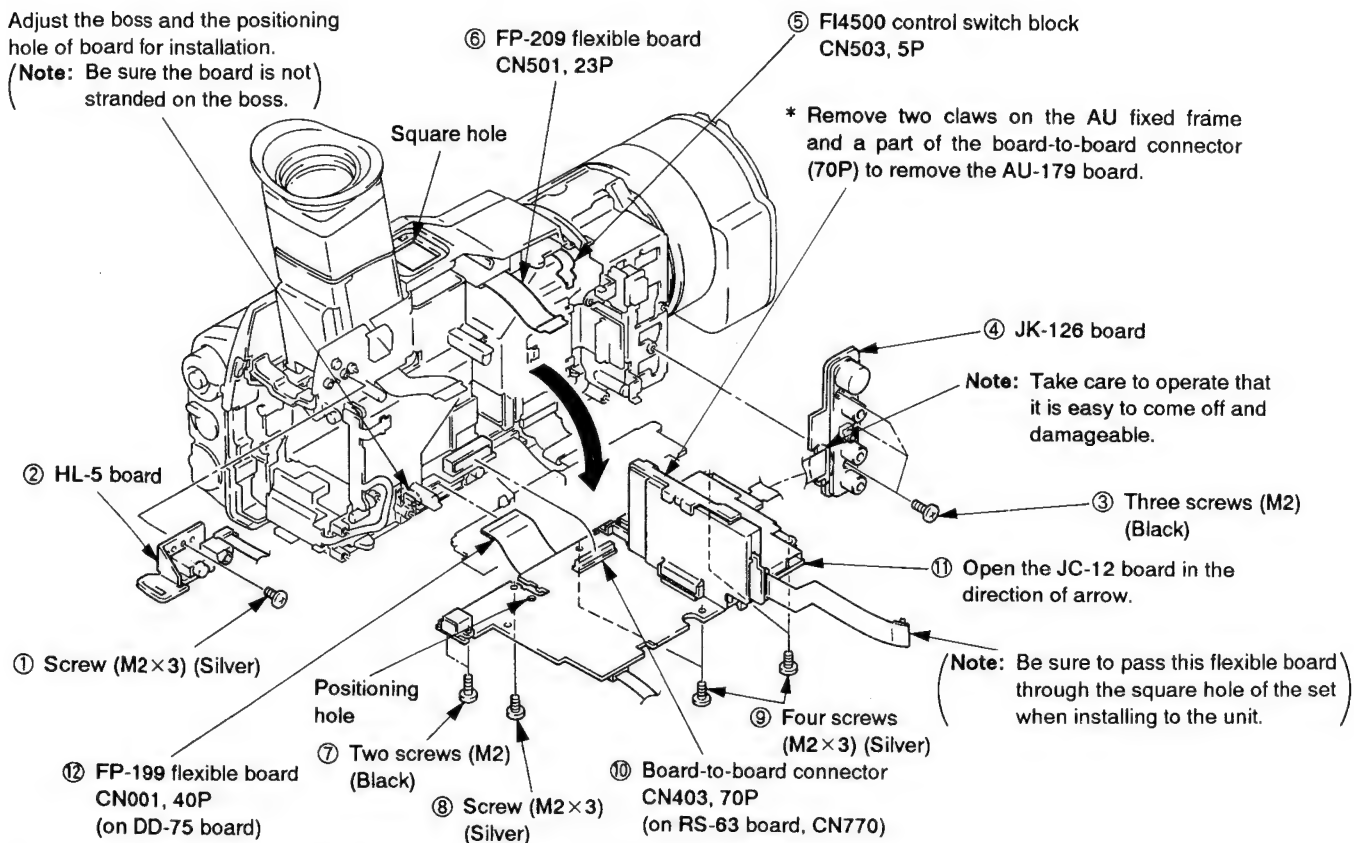
- ① Open the CB-49 board according to 2-3.
- ② Connect the specified jigs as in the figure.



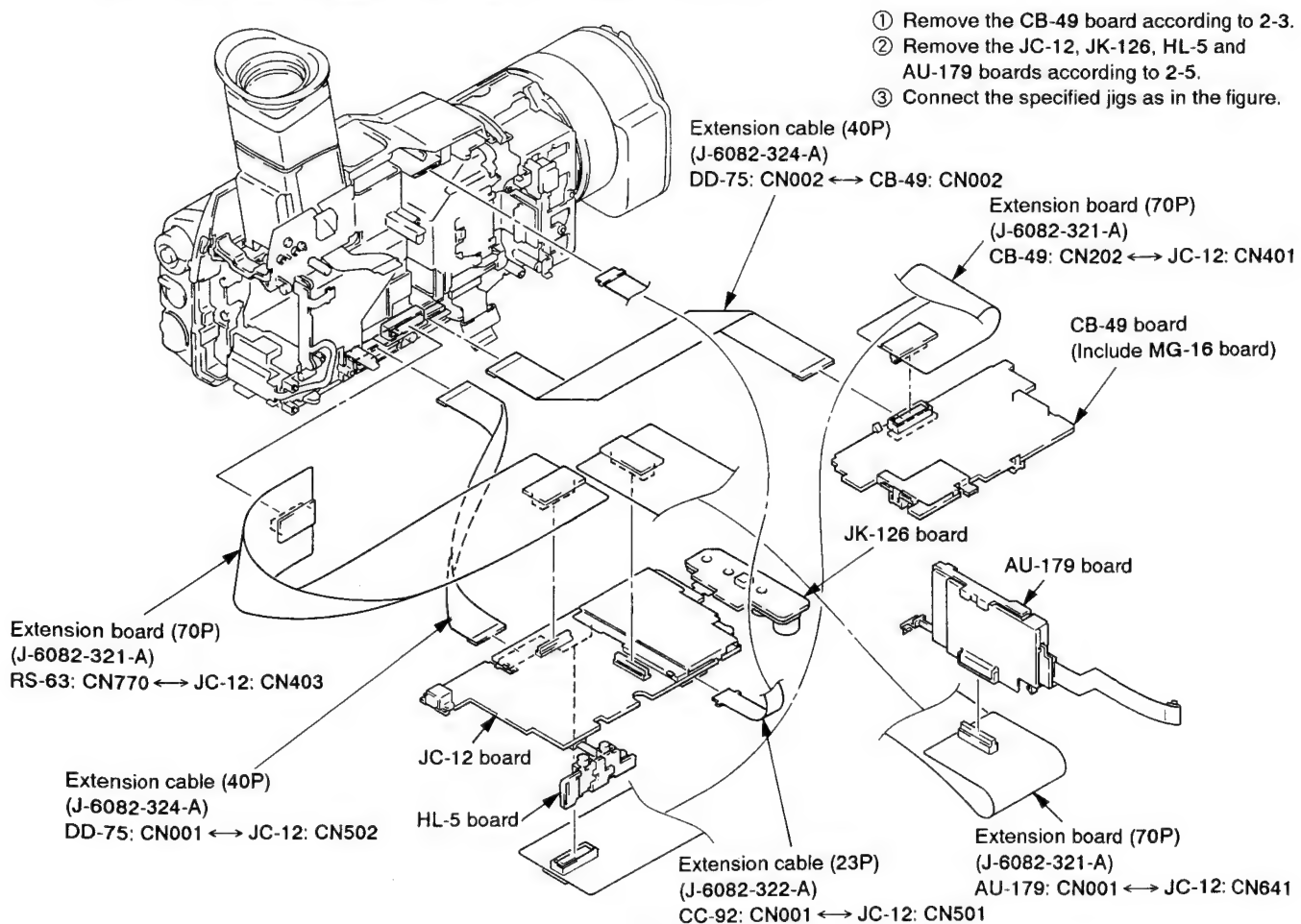
2-5. REMOVAL OF JC-12 BOARD, JK-126 BOARD AND HL-5 BOARD

Adjust the boss and the positioning hole of board for installation.

(Note: Be sure the board is not stranded on the boss.)



2-6. SERVICE POSITION OF JC-12 BOARD AND AU-179 BOARD (CHECK OR ADJUSTMENT OF THE VIDEO/AUDIO SYSTEM)



2-7. REMOVAL OF CABINET (R) ASSEMBLY

Installing procedure of the cabinet (R) assembly

1. Press down the two of cassette lid (upper) lock release lever in the direction of arrow.

2. **Close the cassette lid (upper)** in the state of step 1.

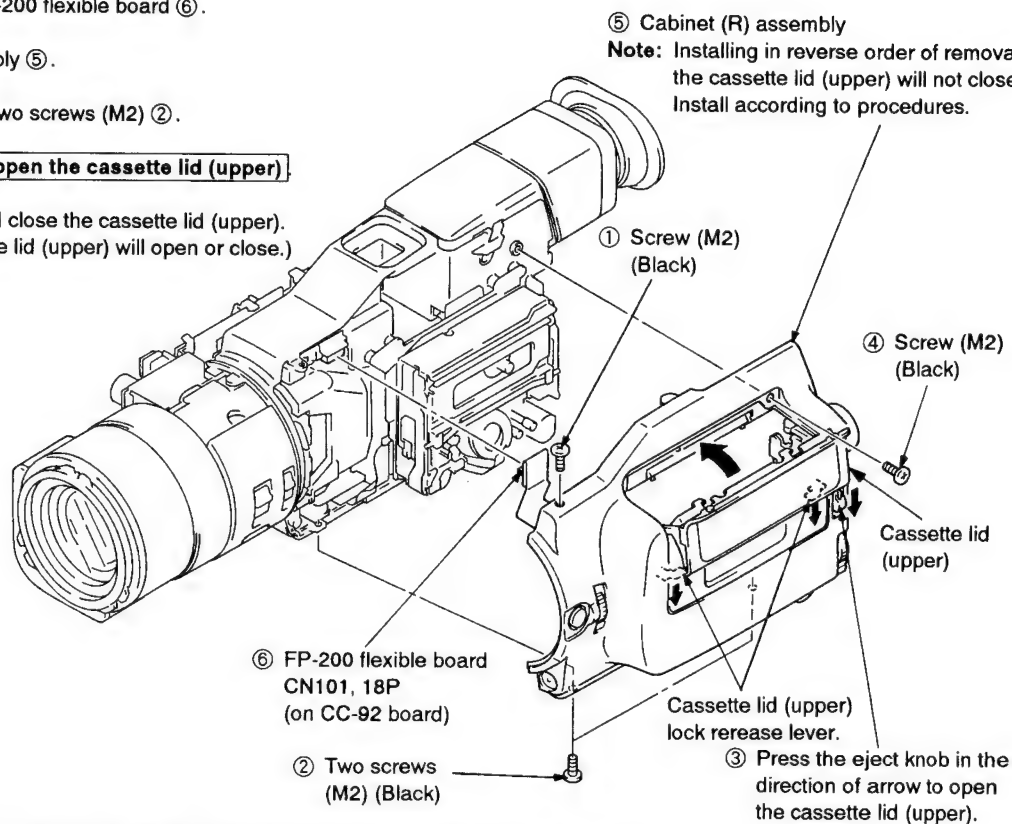
3. Connect the connector of FP-200 flexible board ⑥.

4. Install the cabinet (R) assembly ⑤.

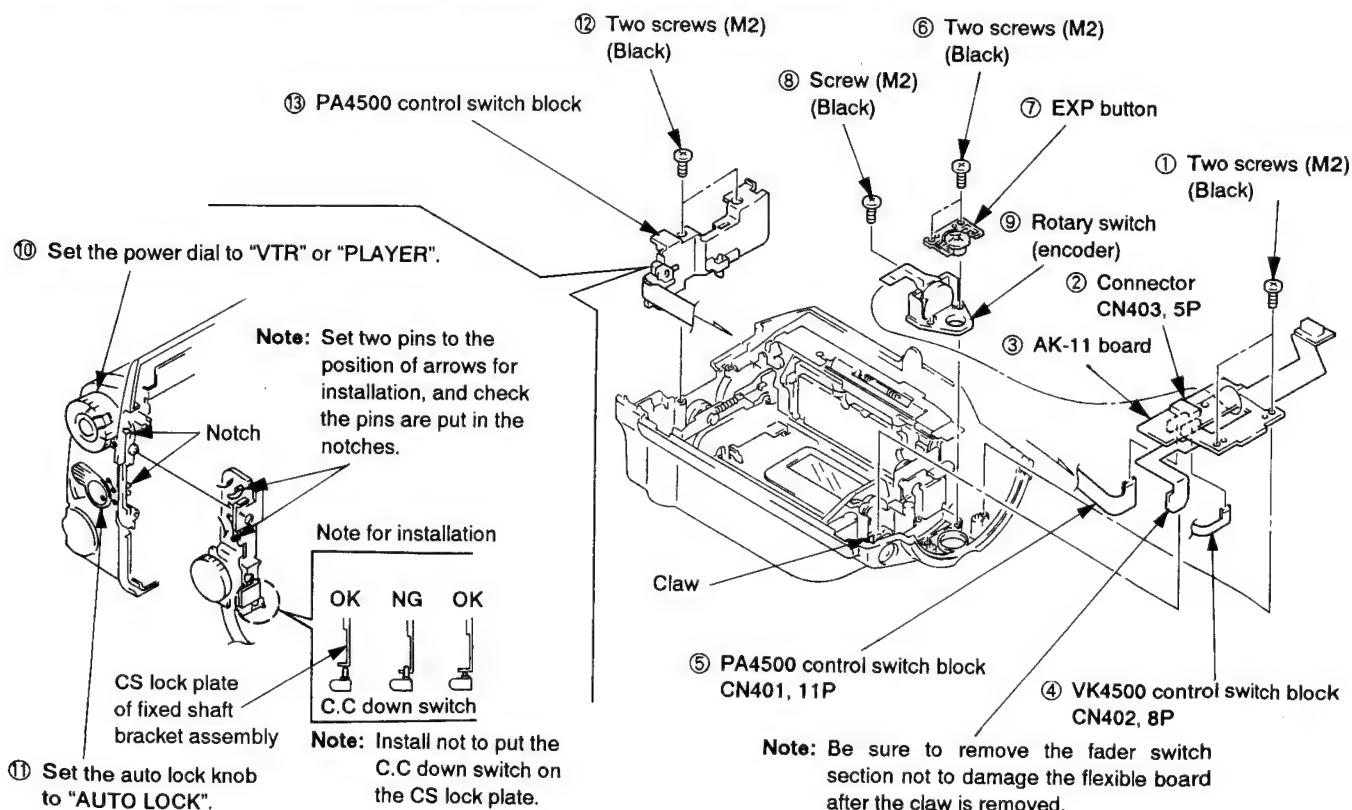
5. Fasten a screw (M2) ① and two screws (M2) ②.

6. Press the eject knob ③ and **open the cassette lid (upper)**.

7. Fasten the screw (M2) ④ and close the cassette lid (upper).
(Be sure to check the cassette lid (upper) will open or close.)

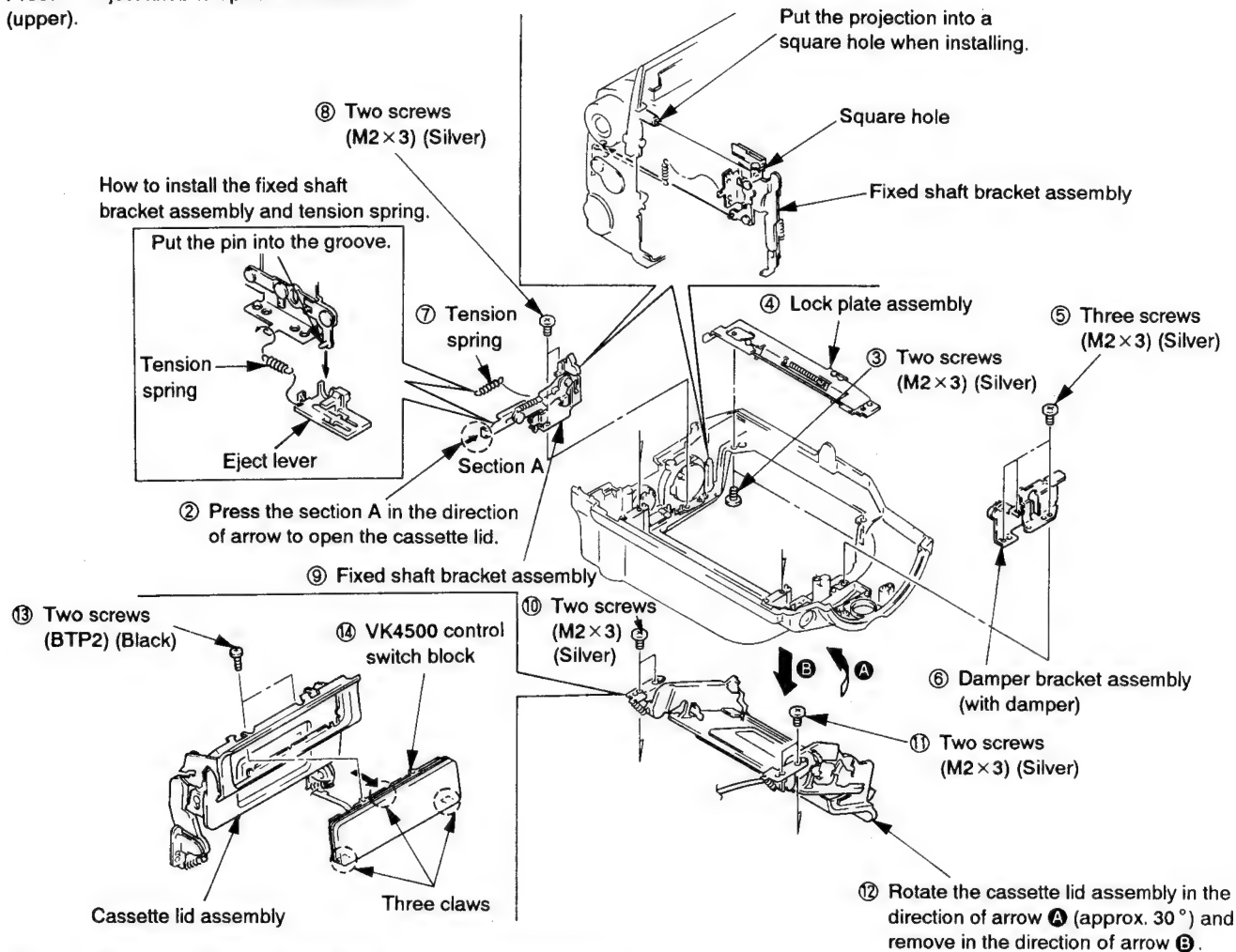


2-8. REMOVAL OF AK-11 BOARD AND PA4500 CONTROL SWITCH BLOCK



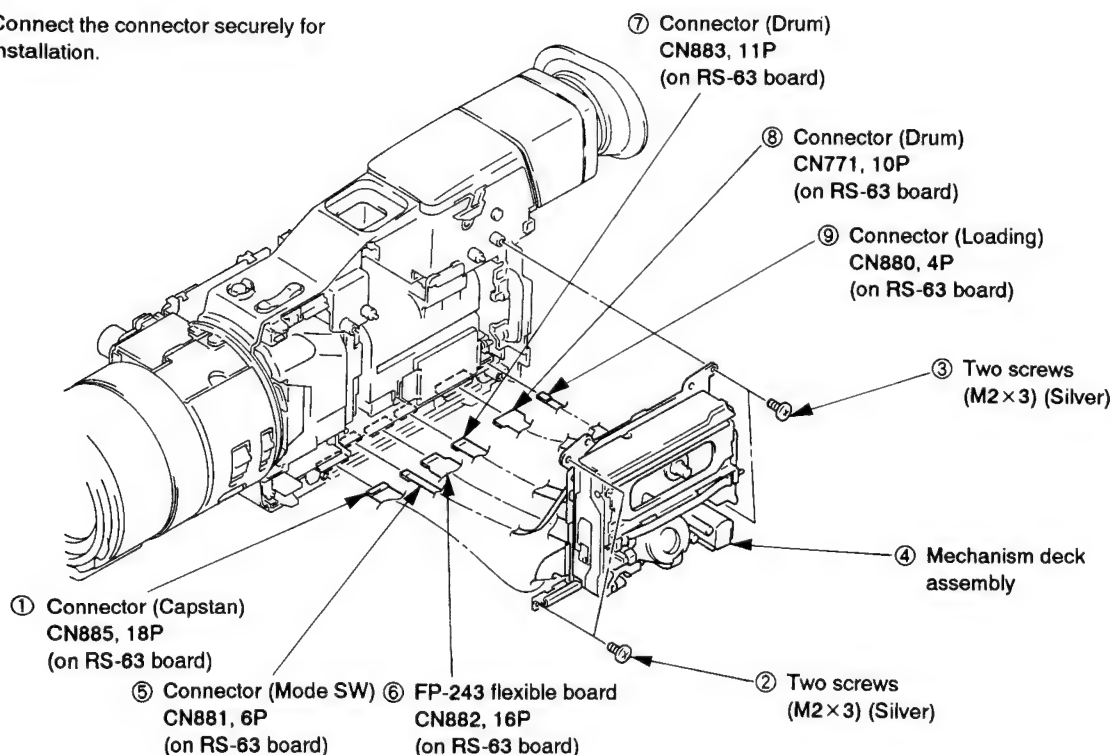
2-9. REMOVAL OF CASSETTE LID ASSEMBLY AND VK4500 CONTROL SWITCH BLOCK

- ① Press the eject knob to open the cassette lid (upper).

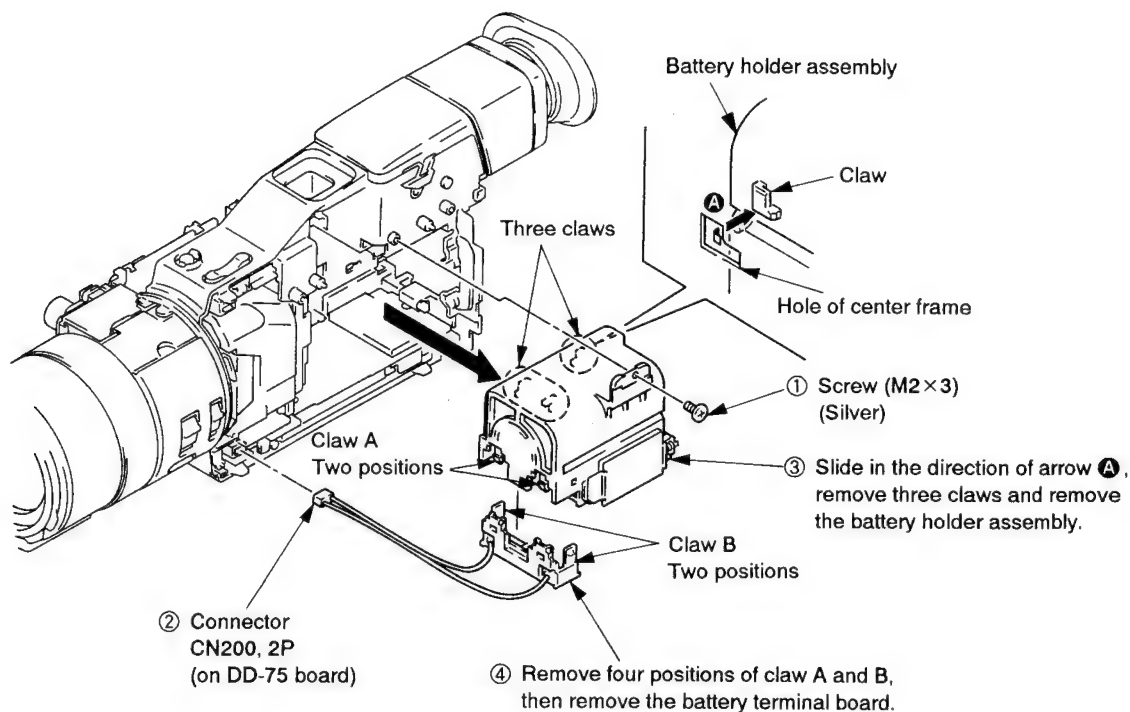


2-10. REMOVAL OF MECHANISM DECK ASSEMBLY

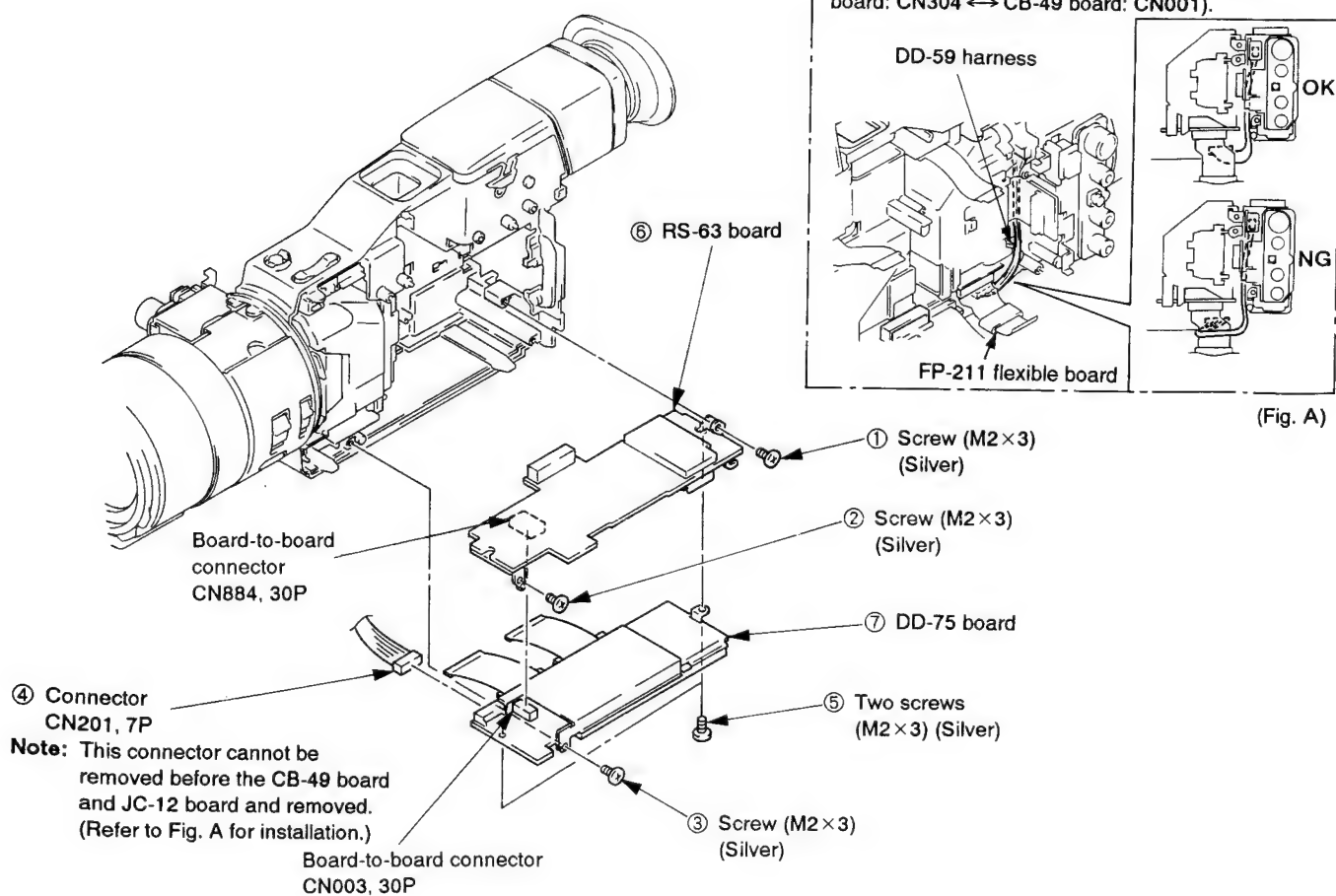
Note: Connect the connector securely for installation.



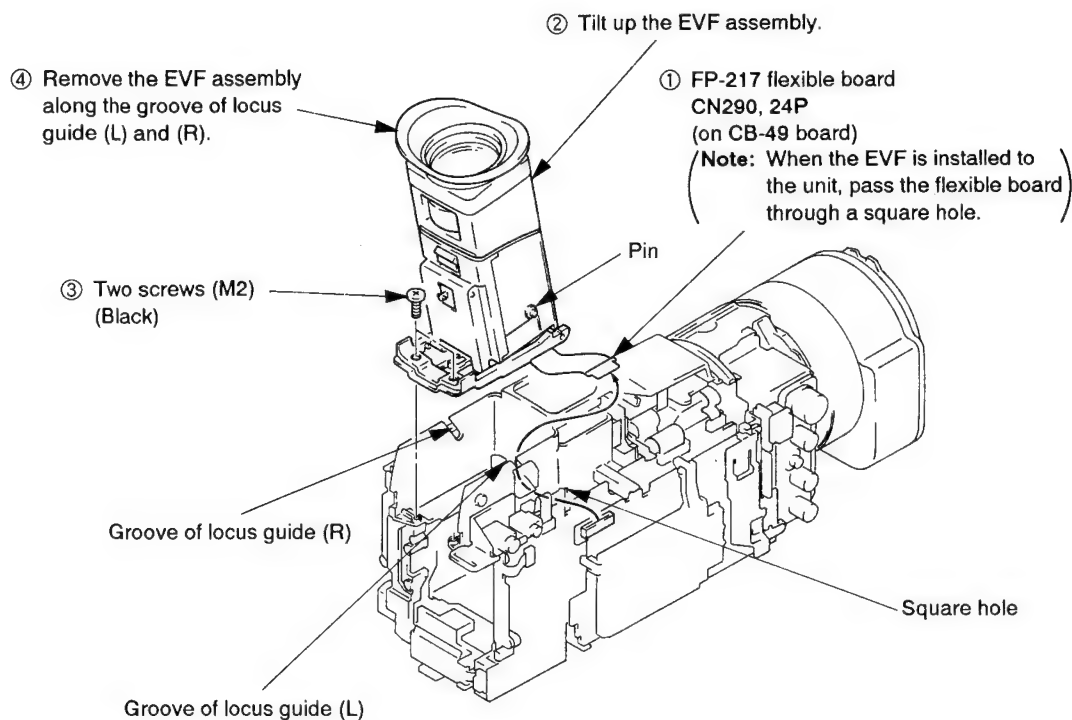
2-11. REMOVAL OF BATTERY HOLDER ASSEMBLY



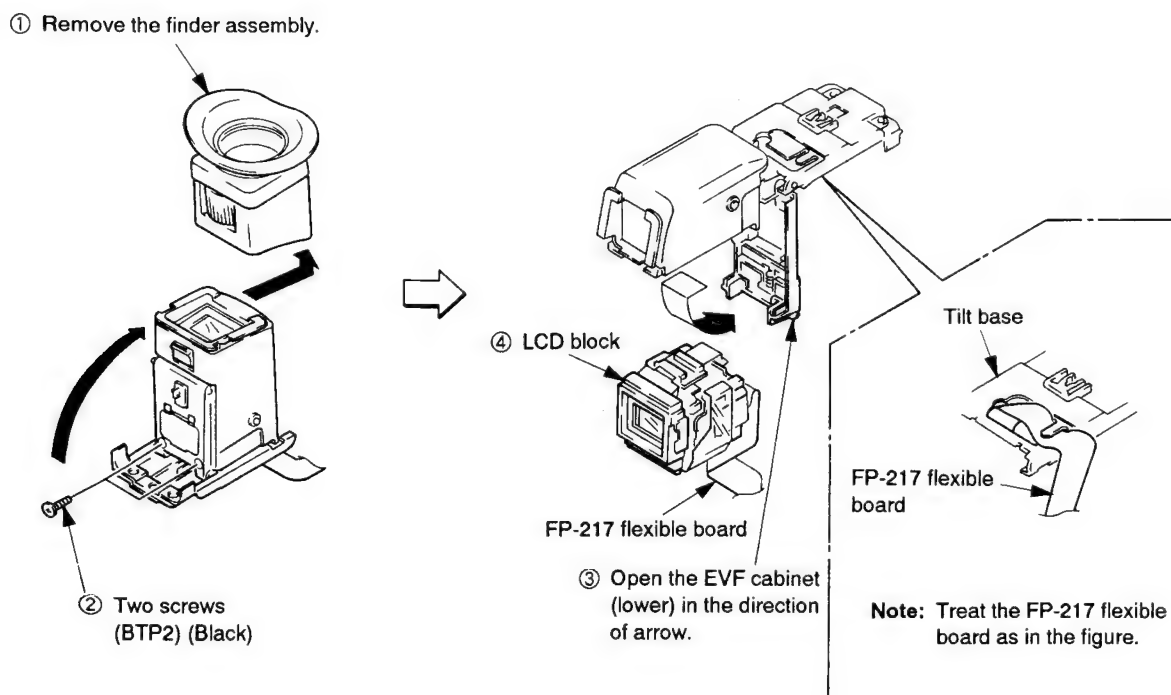
2-12. REMOVAL OF RS-63 BOARD AND DD-75 BOARD



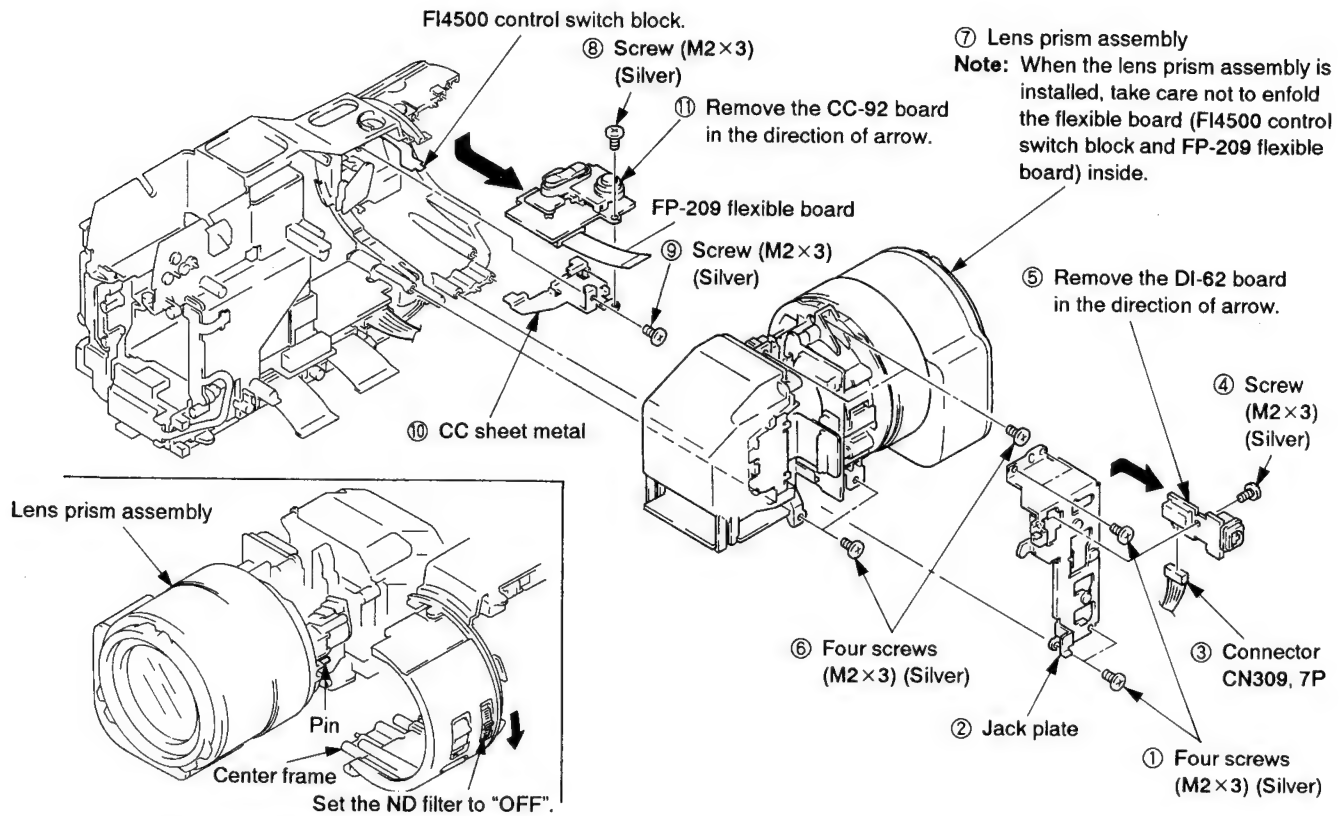
2-13. REMOVAL OF EVF ASSEMBLY



2-14. REMOVAL OF LCD BLOCK (EVF ASSEMBLY)

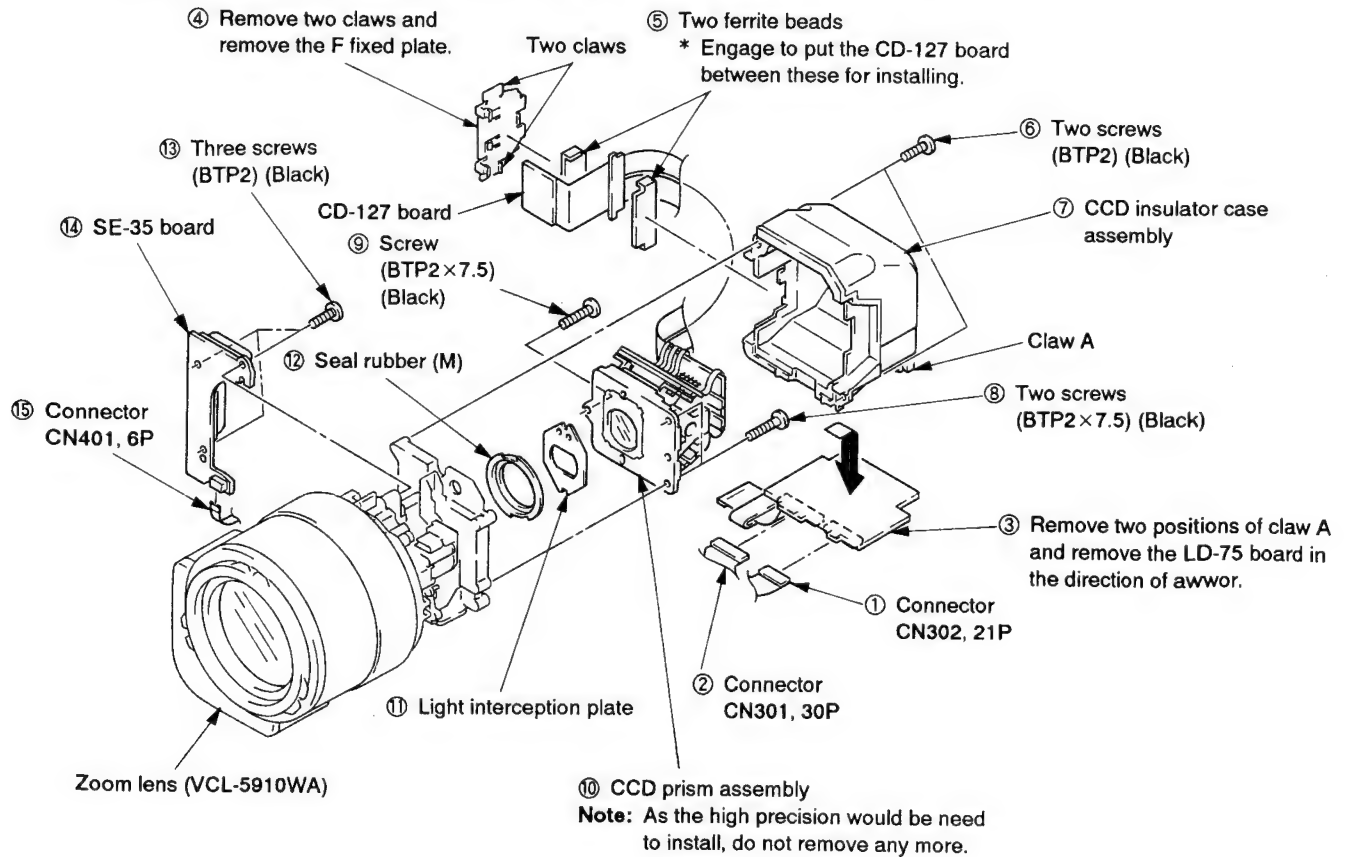


2-15. REMOVAL OF DI-62, CC-92 BOARDS AND LENS PRISM ASSEMBLY

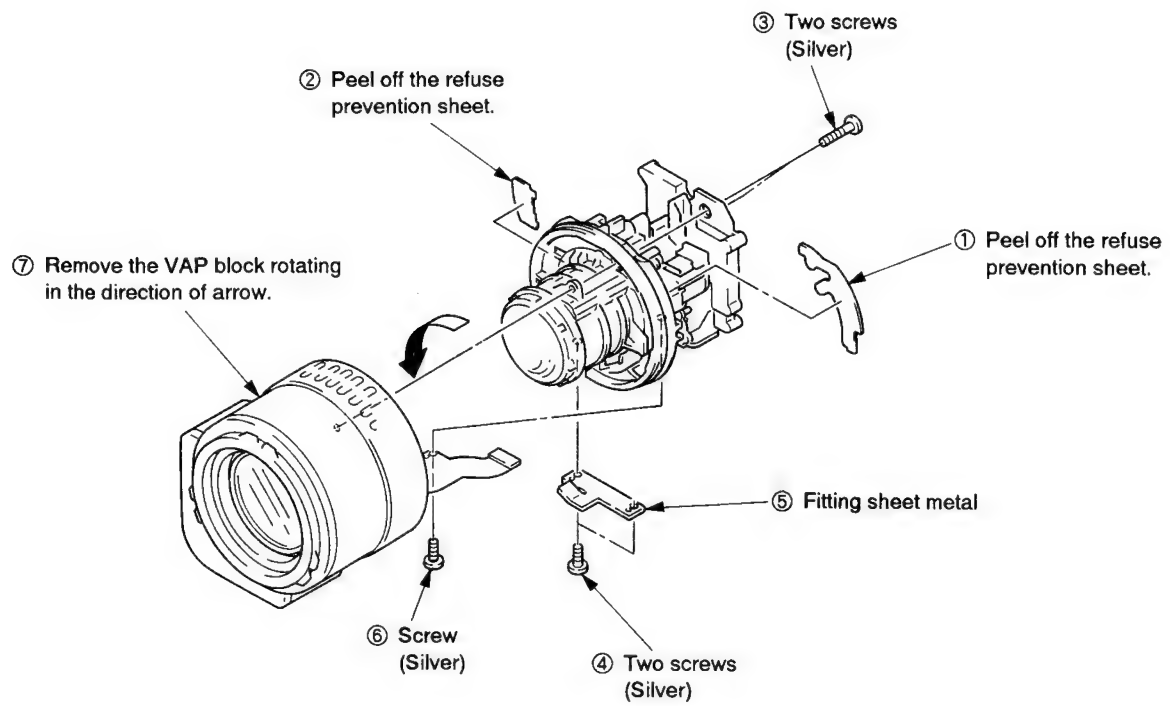


Note: For installation of the lens prism assembly, set the switch knob of ND filter to "OFF" and check that the pin is put in the ND filter switch lever.

2-16. REMOVAL OF LD-75, SE-35 BOARDS AND PRISM CCD ASSEMBLY

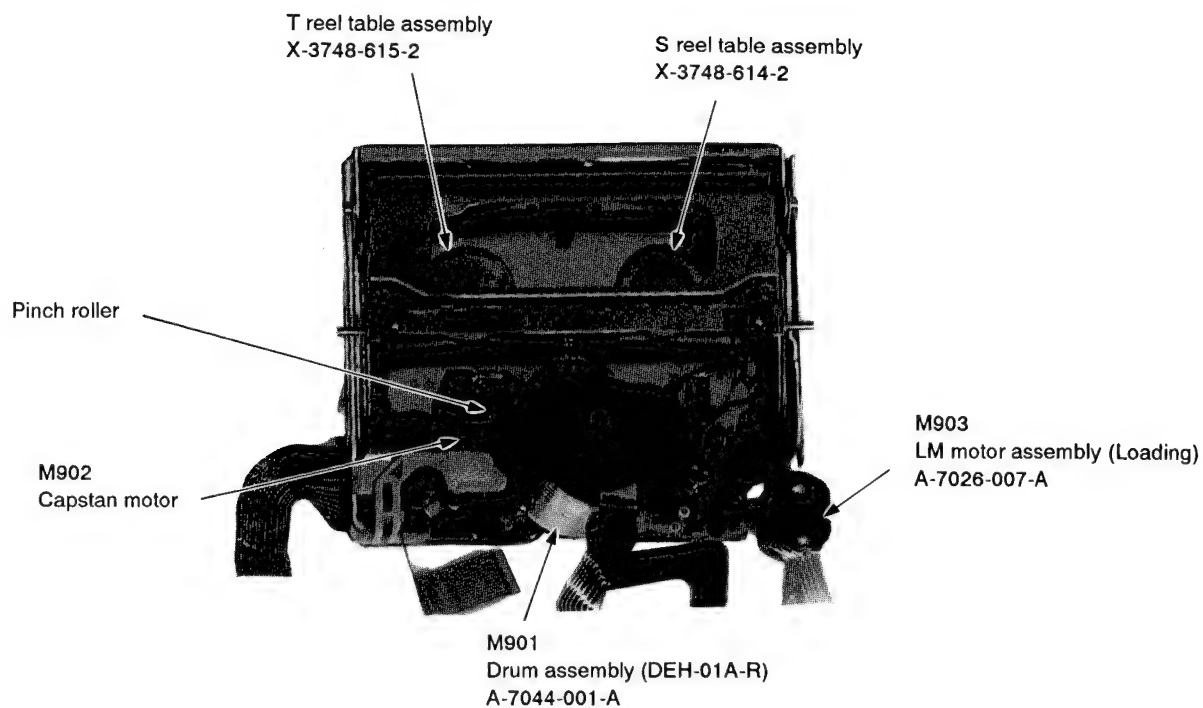


2-17. REMOVAL OF ZOOM LENS ASSEMBLY

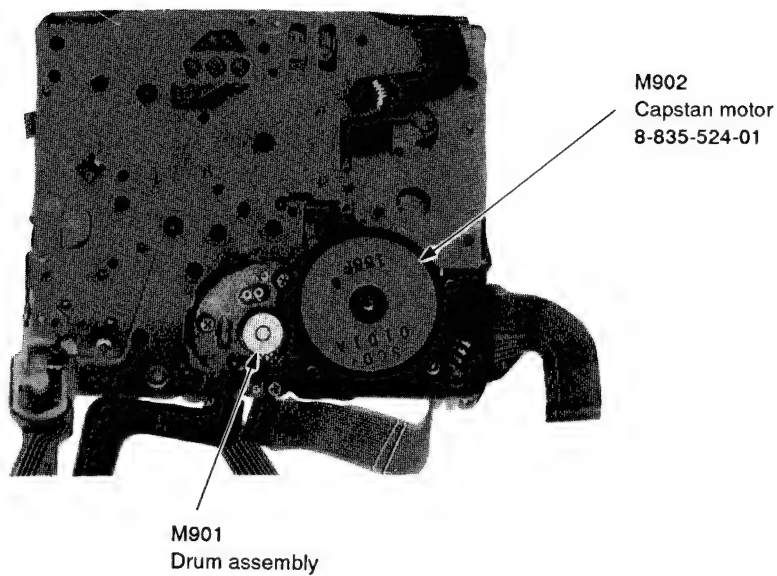


2-18. INTERNAL VIEWS

— Top side —

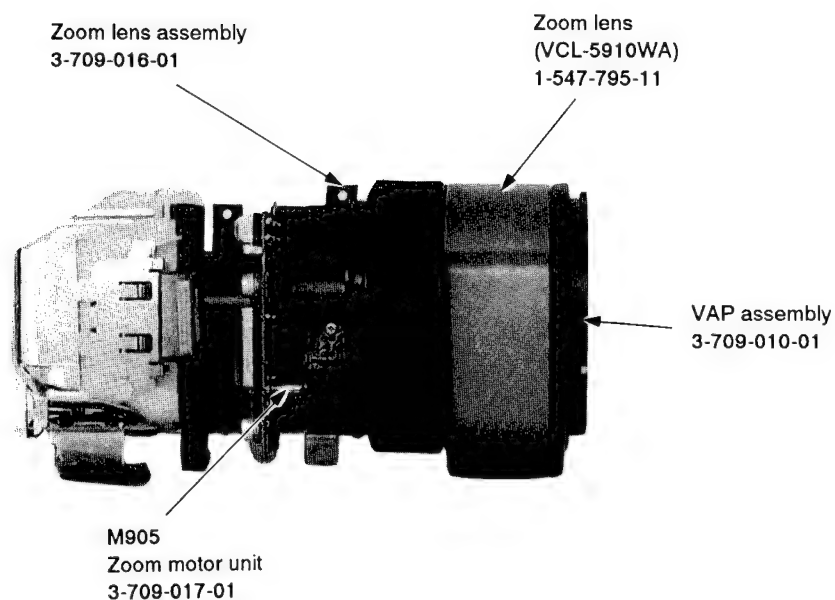


— Bottom side —

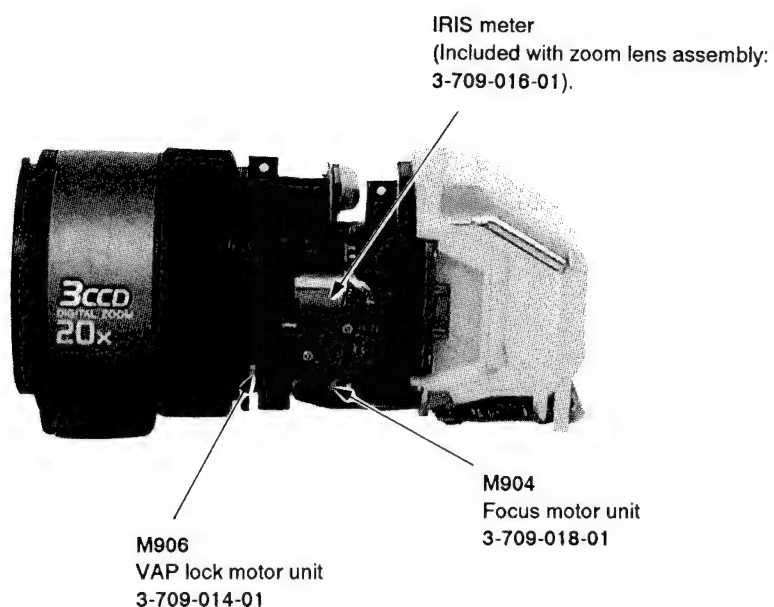


— Zoom lens —

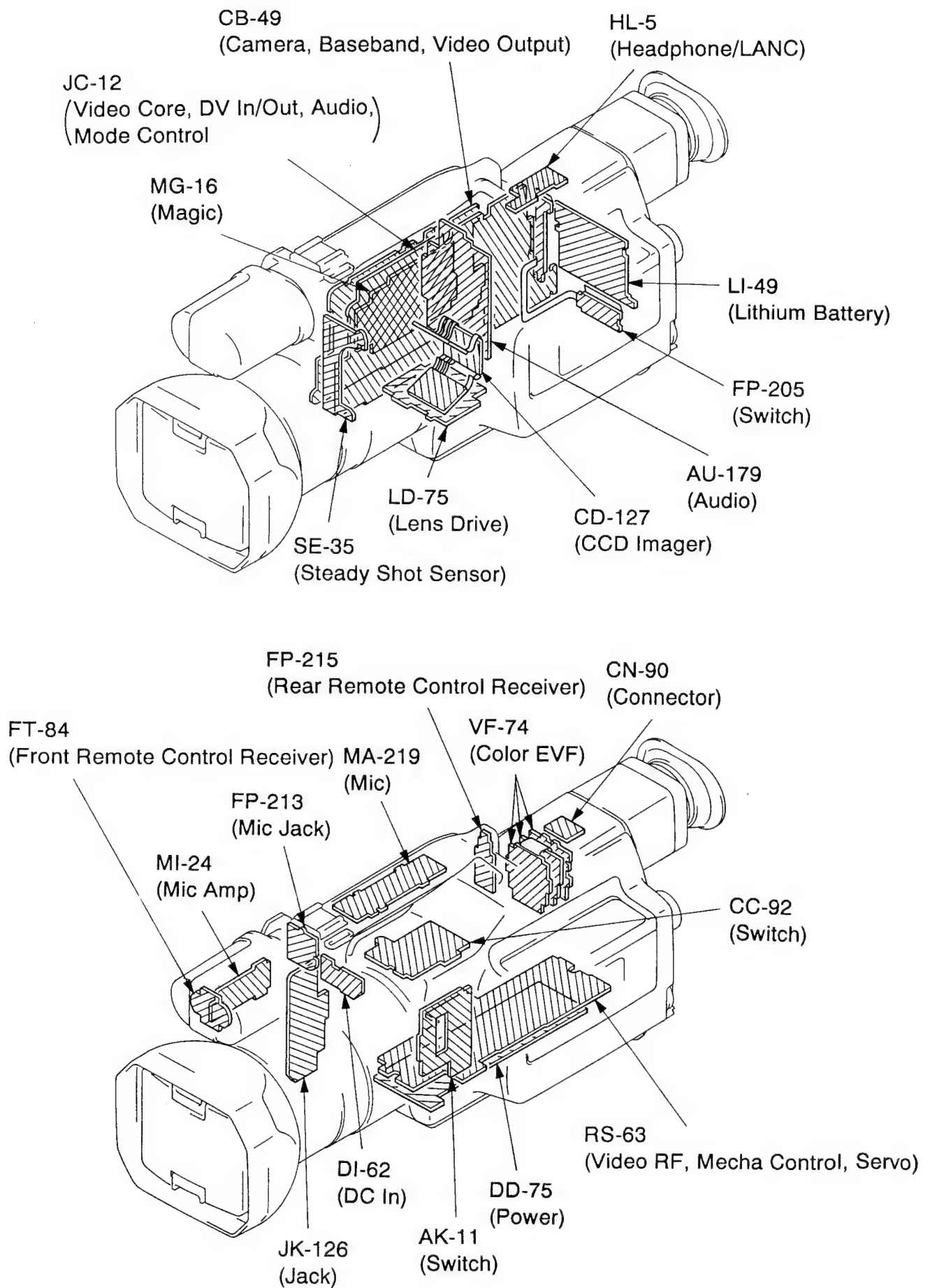
— Left side —

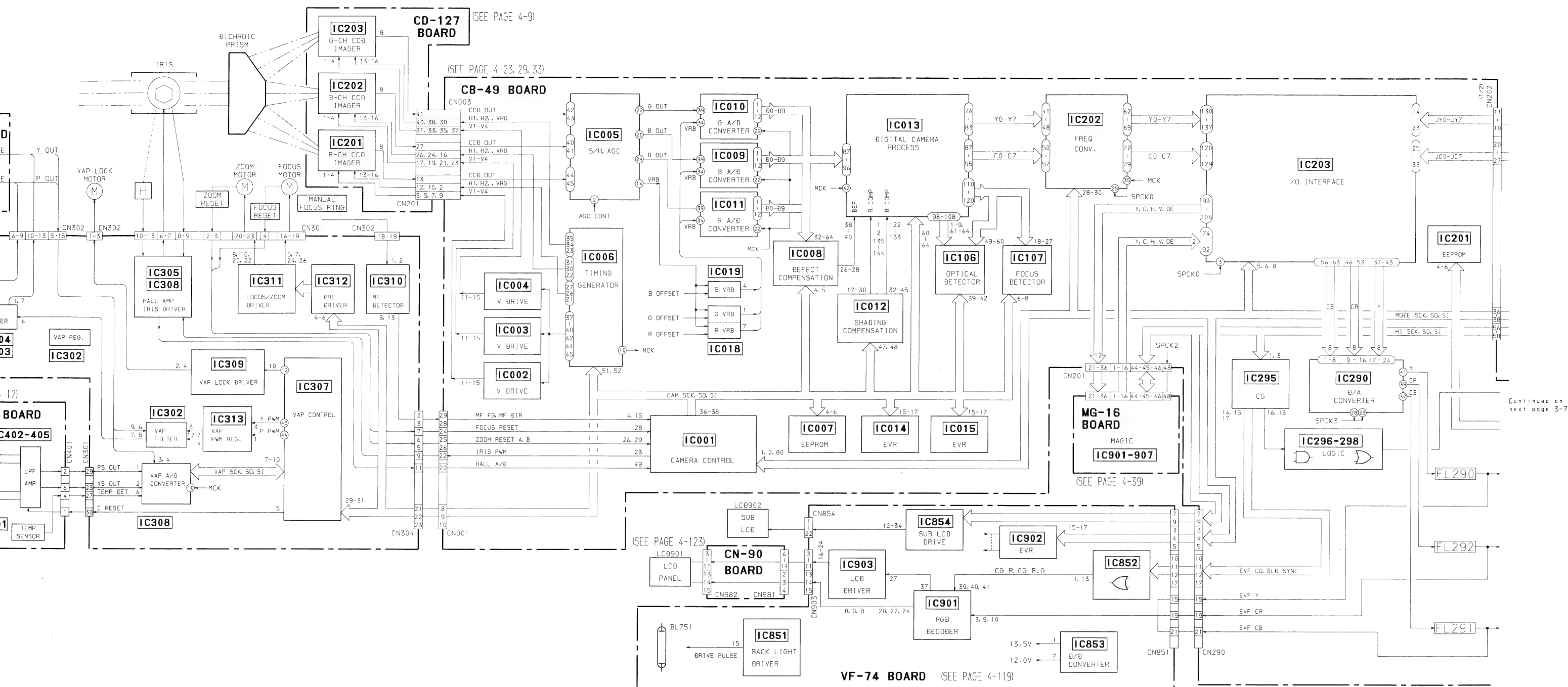


— Right side —

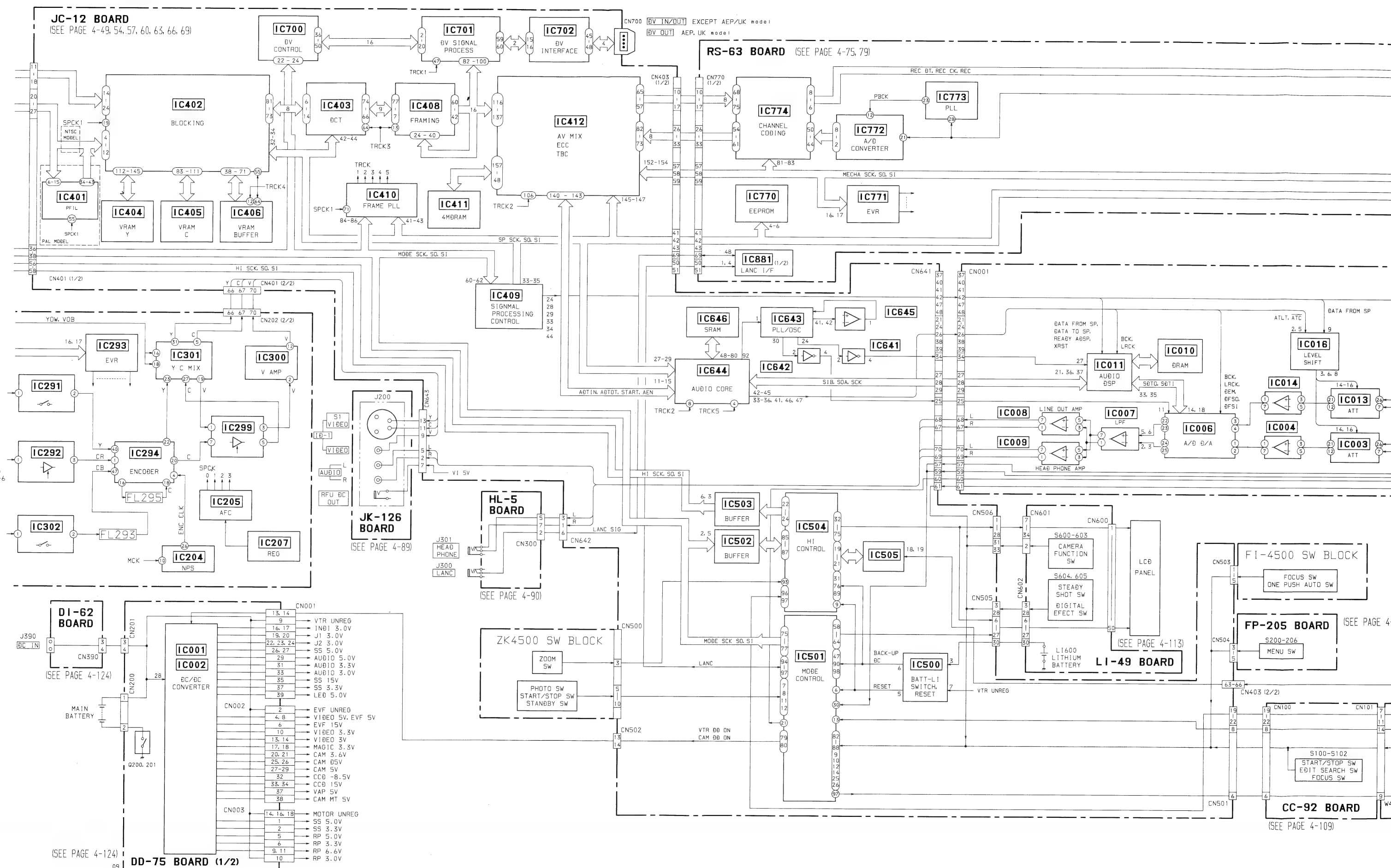


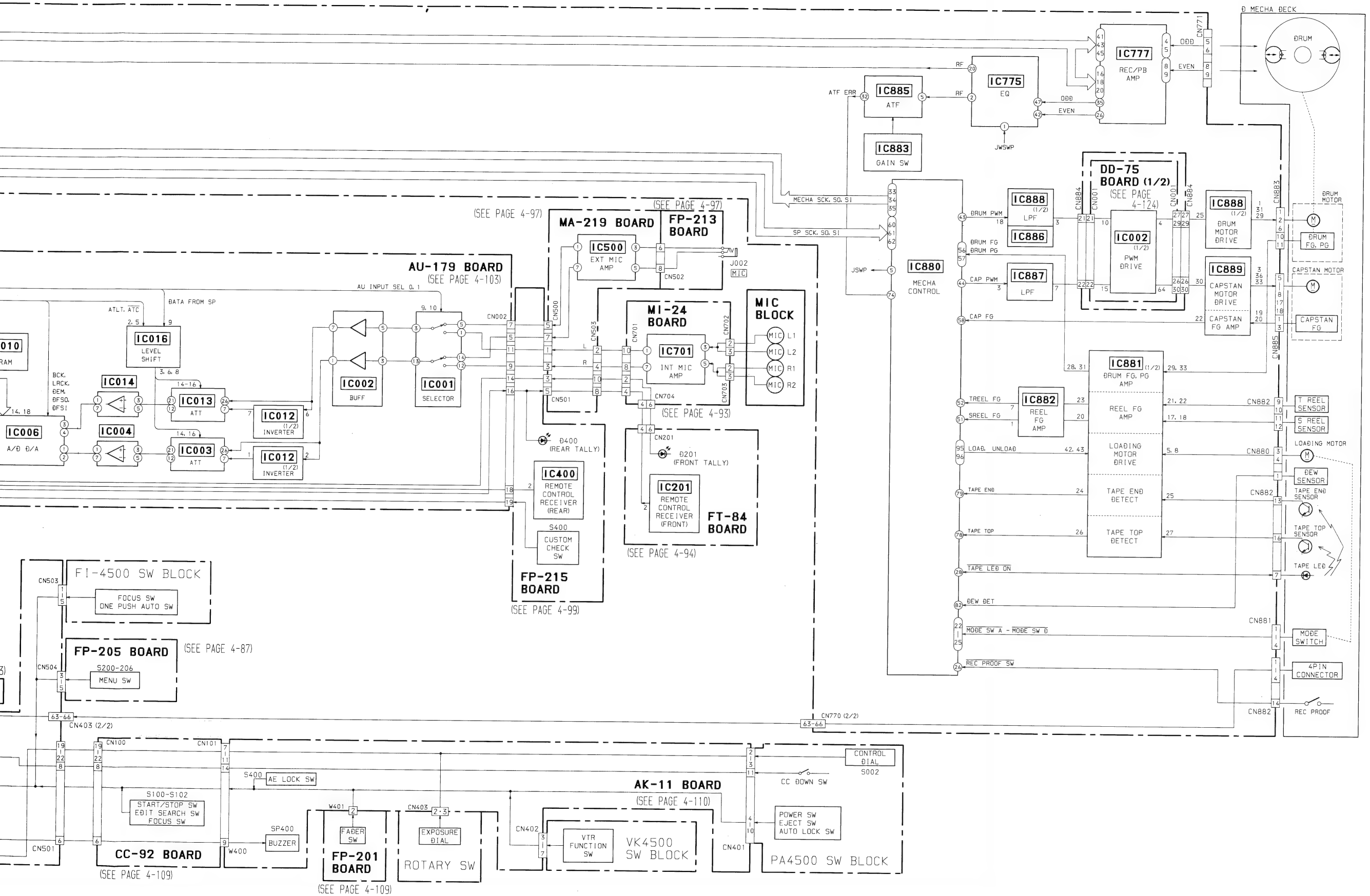
2-19. CIRCUIT BOARDS LOCATION



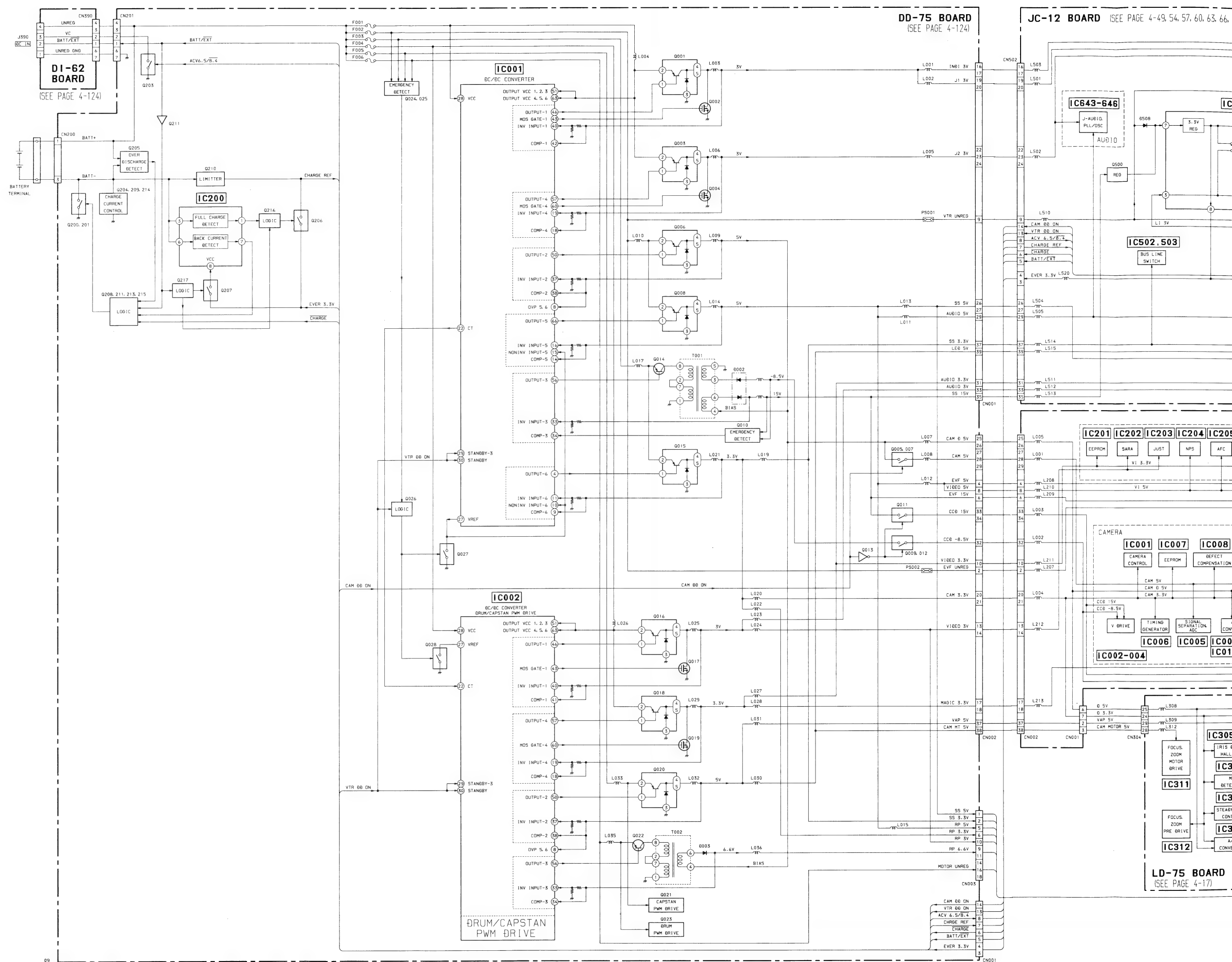


3-2. OVERALL BLOCK DIAGRAM (2)



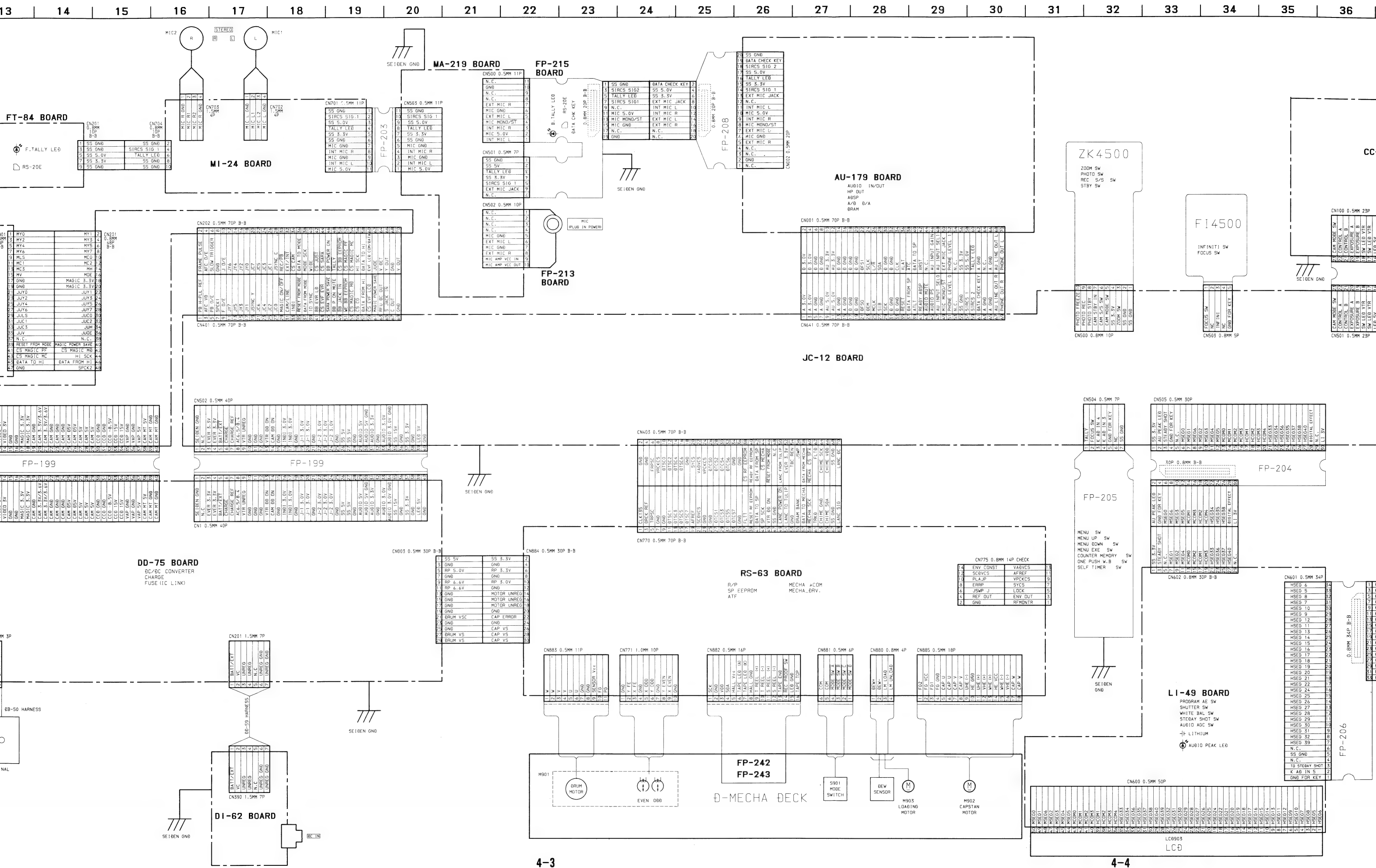


3-3. POWER BLOCK DIAGRAM



4-1. FRAME SCHEMATIC DIAGRAM
















4-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS




THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this , the necessary note is printed in each block.)

- For printed wiring boards.
-  : Pattern from the side which enables seeing.
(The other layers' patterns are not indicated.)
- Circled numbers refer to waveforms.
-  : Through hole.

* Caution:

Pattern face side:	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side:	Parts on the parts face side seen from the parts face are indicated.

- For schematic diagrams.
- Caution when replacing chip parts.
New parts must be attached after removal of chip.
Be careful not to heat the minus side of tantalum capacitor, because it is damaged by the heat.
- All resistors are in ohms, 1/4W unless otherwise noted.
Chip resistor are 1/10W unless otherwise noted.
kΩ : 1000Ω , MΩ : 1000kΩ .
- All capacitors are in μF unless otherwise noted. pF: μ μF.
50V or less are not indicated except for electrolytics and tantalums.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
-  : nonflammable resistor.
-  : panel designation.
-  : internal component.
-  : adjustment for repair.
-  : B+ Line.
-  : B- Line.
-  : IN/OUT direction of (+, -) B LINE.
- Circled numbers refer to waveforms.

Note: The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.	Note: Les composants identifiés par une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
--	--

When indicating parts by reference number, please include the board name.

- Measuring conditions voltage value and waveform. (CAMERA REC mode)
- The object is color bar chart of pattern box.
- Voltages are dc between ground and measurement points. Readings are taken with a digital multimeter (DC 10MΩ).
- Voltage variations may be noted due to normal production tolerances.

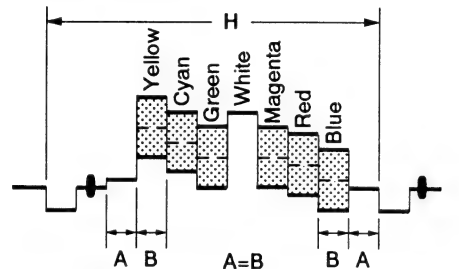
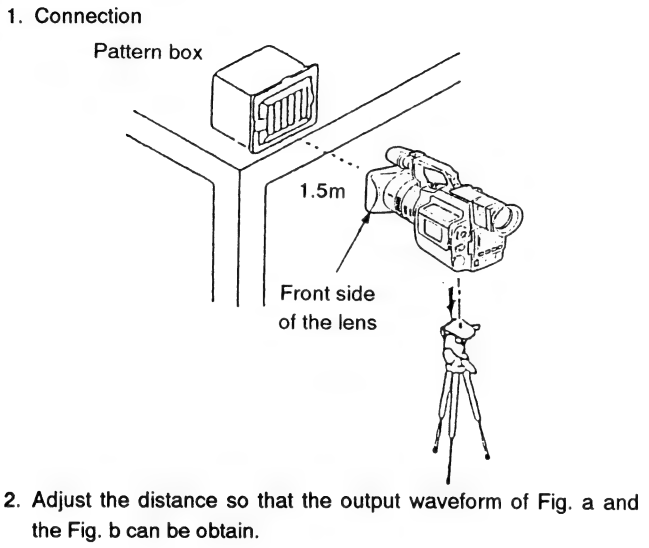


Fig. a (Video output terminal output waveform)

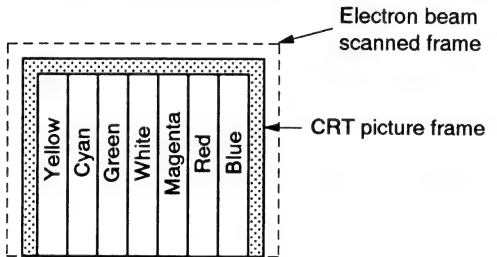
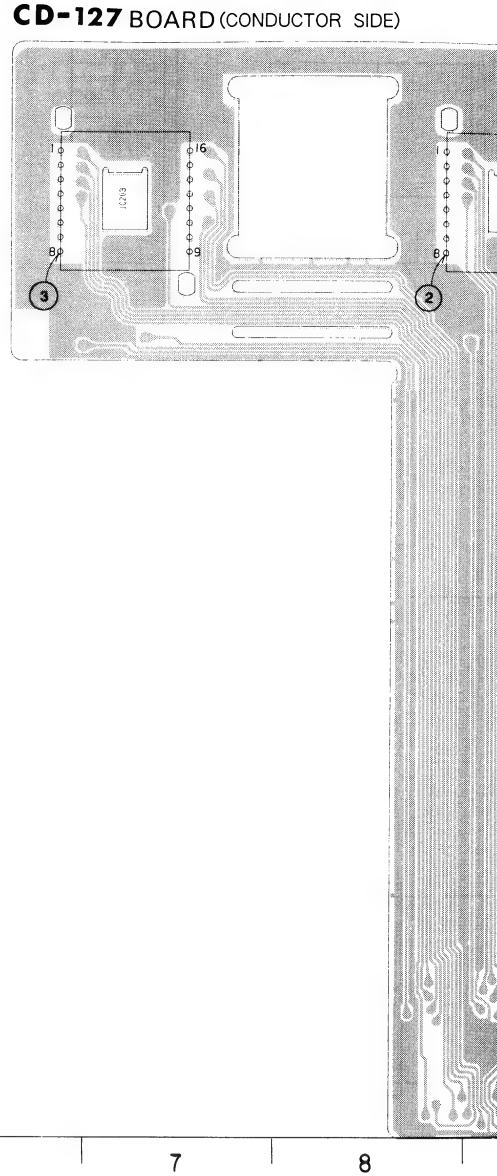
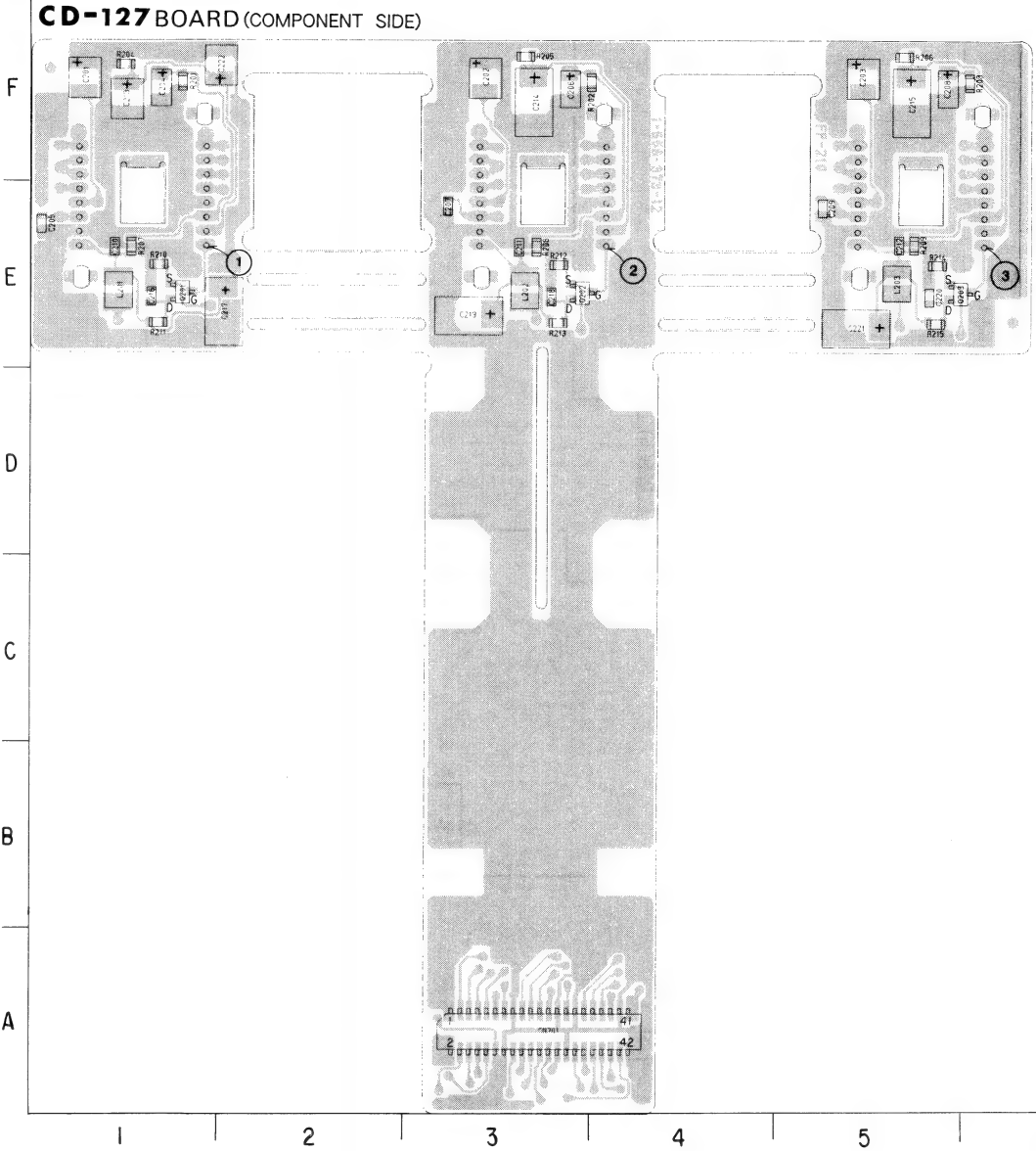


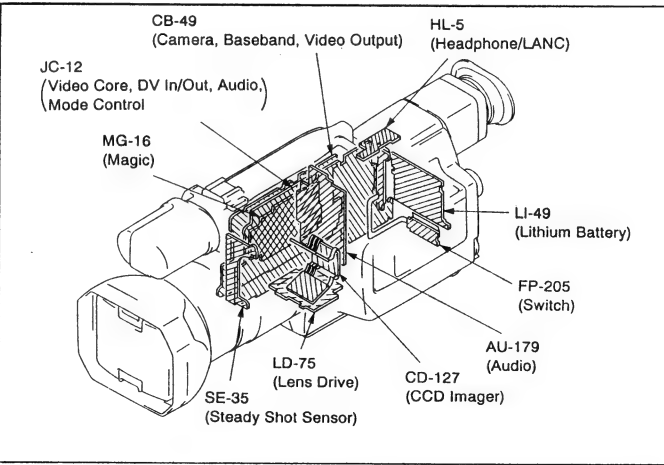
Fig. b (Picture on monitor TV)

- (REC/PB mode)
- REC mode
Set the data: 09 to page: 5, address: 02 with an adjusting remote commander, then measure in the CAMERA REC mode.
(Note) Set the data: 00 to page: 5, address: 02 after the operation.
- PB mode
Measure the SW/OL standard tape (XH2-3) in the playback mode. (Used tester: DC10MΩ)
- Some difference can be found on the voltage due to the input impedance of an used tester.

CD-127 (CCD IMAGER) PRINTED WIRING BOARD
— Ref. No. CD-127 BOARD: 1000 series —



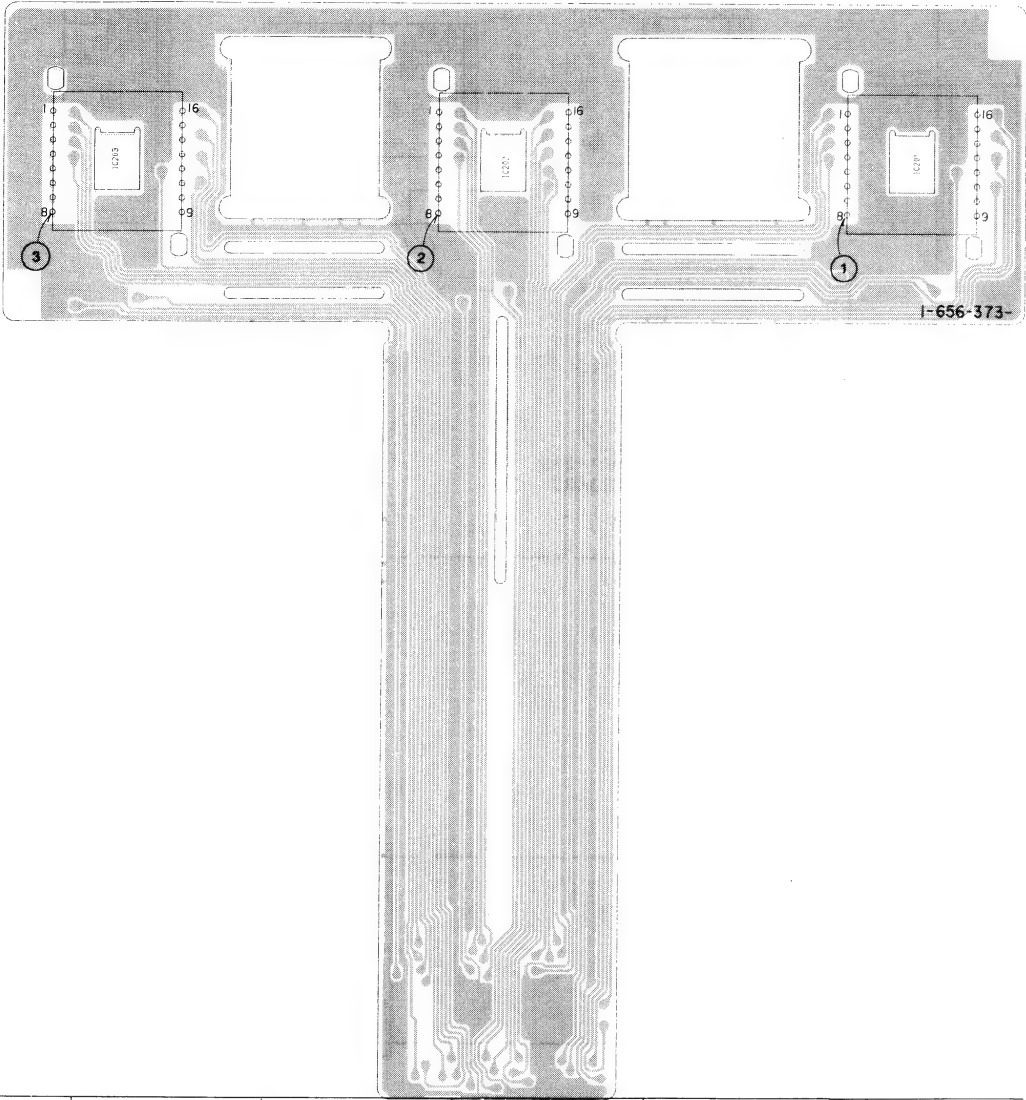
There are few cases that the part isn't mounted in t printed on this diagram.



- For printed wiring boards.
- This board is four-layer print board. However, the p of layers 2 to 3 have not been included in the diagram.

There are few cases that the part isn't mounted in this model is printed on this diagram.

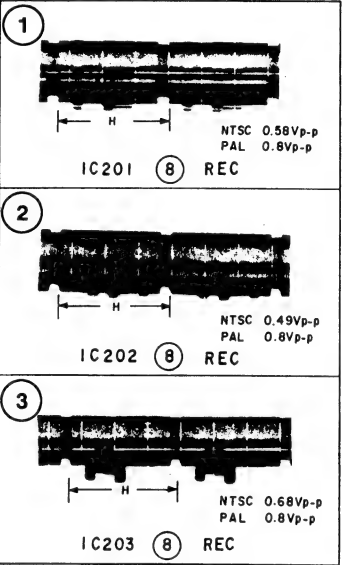
CD-127 BOARD (CONDUCTOR SIDE)



CD-127 BOARD

C201	F-1
C202	F-3
C203	F-5
C204	F-1
C206	F-3
C208	F-5
C210	E-1
C211	E-3
C212	E-5
C213	F-1
C214	F-3
C215	F-5
C216	E-1
C217	E-2
C218	E-3
C219	E-5
C220	F-5
C221	F-5
C222	F-2
CN201	A-3
L201	E-1
L202	E-3
L203	E-5
Q201	E-1
Q202	E-3
Q203	E-5
R201	F-1
R202	F-4
R203	F-6
R204	F-1
R205	F-3
R206	F-5
R207	E-1
R208	E-3
R209	E-5
R210	E-1
R211	E-3
R212	E-5
R213	E-1
R214	E-3
R215	E-5

CD-127 BOARD



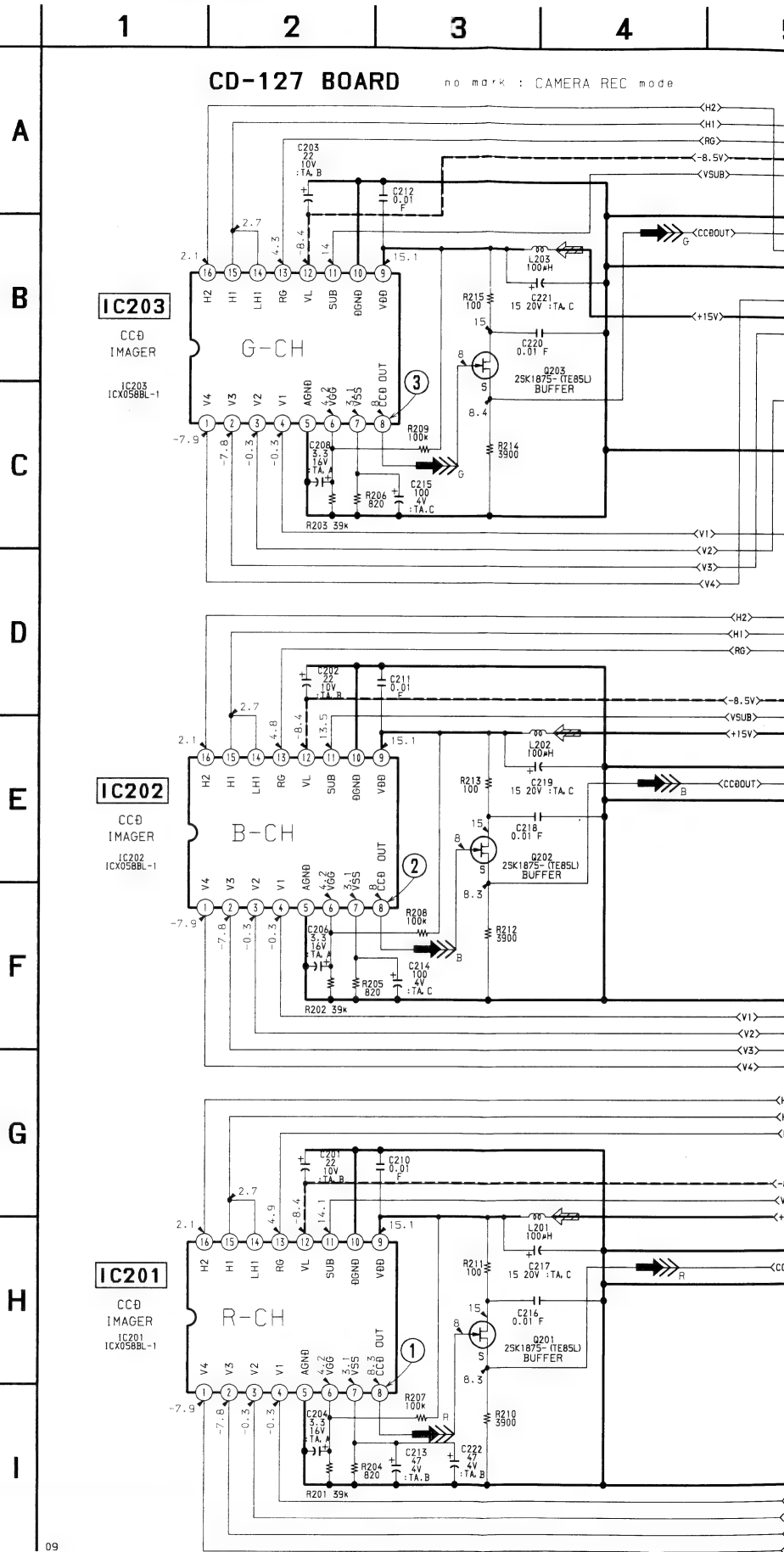
DCR-VX1000 : NTSC model
DCR-VX1000E : PAL model

Precautions For Replacing The CCD Imager

- The prism CCD assembly is supplied as the CCD imager for repair.
As highly precise resistance adjustment has been carried out for this prism CCD assembly when supplied, be careful not to apply excessive force, heat, etc. to it.
- The mounted CD-127 board provided as a repair part does not come with IC201, IC202, IC203.
When replacing the board, remove it from the prism CCD assembly and attach a new one.
- Perform all adjustments of the camera block when the CCD imager has been replaced (Prism CCD Assy).
- Handle the CCD imager with attention such as MOS IC as it may be broken by static electricity in the structure.
Also, prevent the receiving light section from dust attached and strong light.

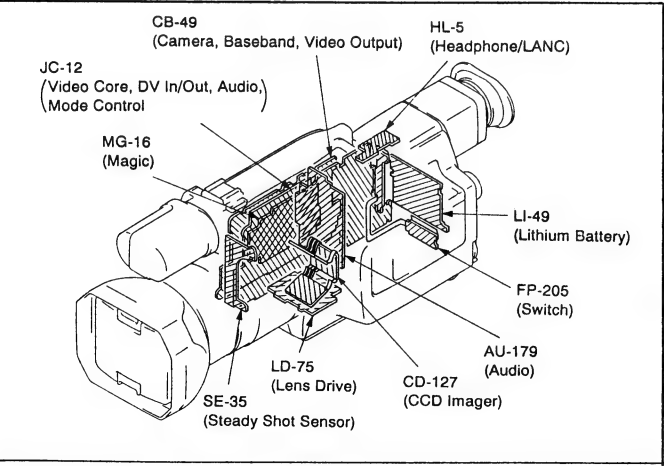
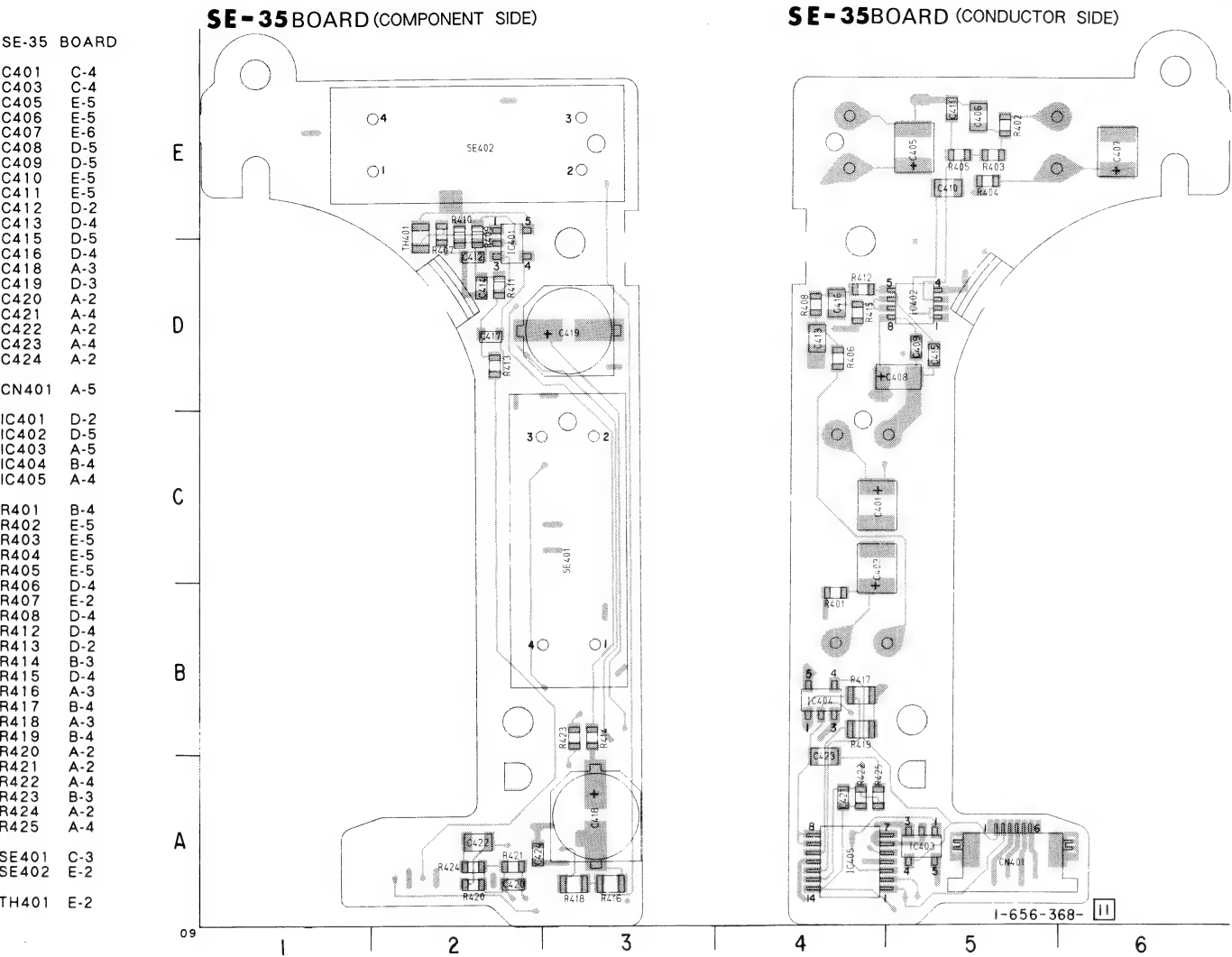
CD-127 (CCD IMAGER) SCHEMATIC DIAGRAM

— Ref. No. CD-127 BOARD: 1000 series —



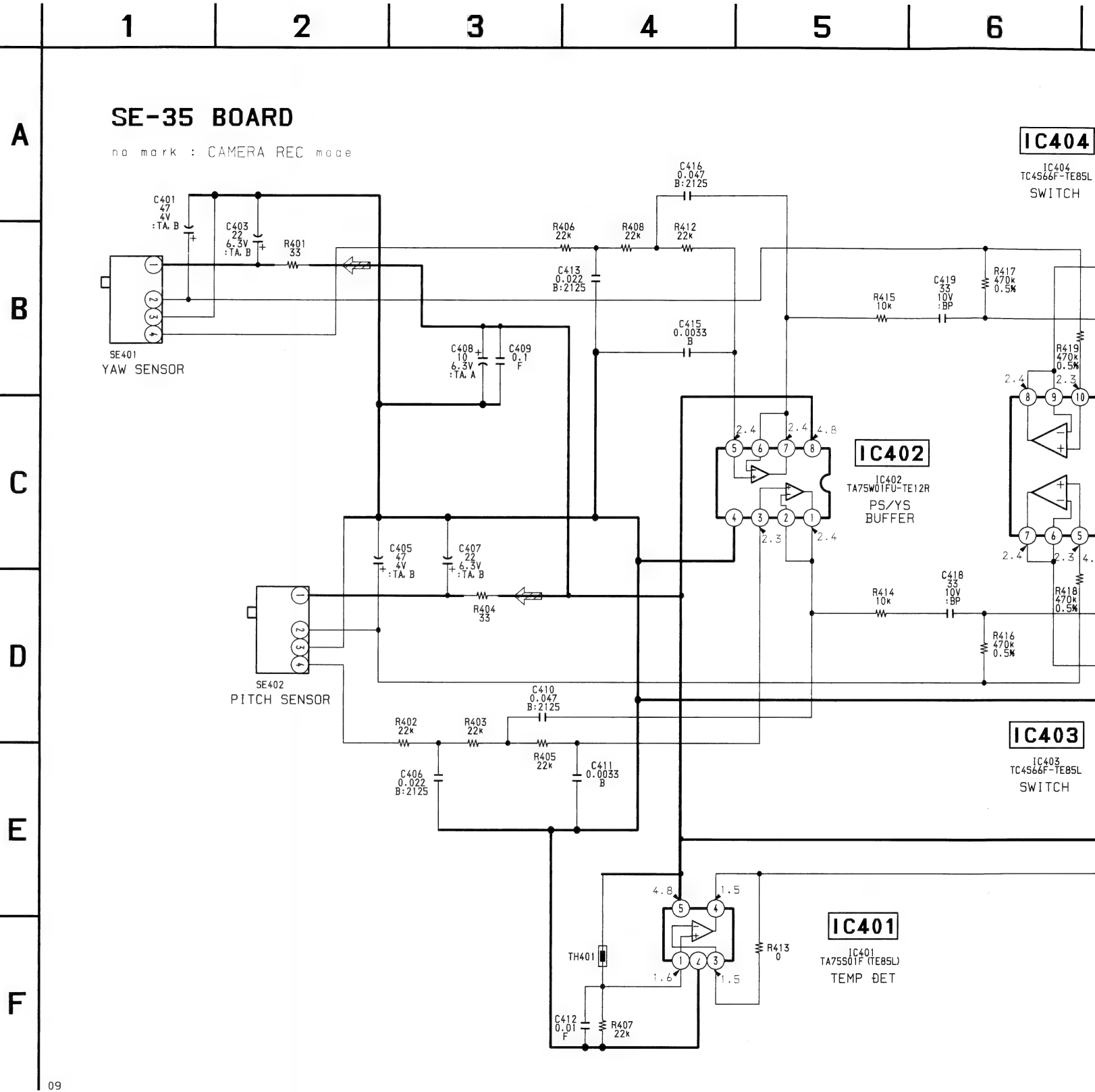
SE-35 (STEADY SHOT SENSOR) PRINTED WIRING BOARD
 — Ref. No. SE-35 BOARD: 1000 series —

There are few cases that the part isn't mounted in this model is printed on this diagram.



- For printed wiring boards.
- This board is four-layer print board. However, the patterns of layers 2 to 3 have not been included in the diagram.

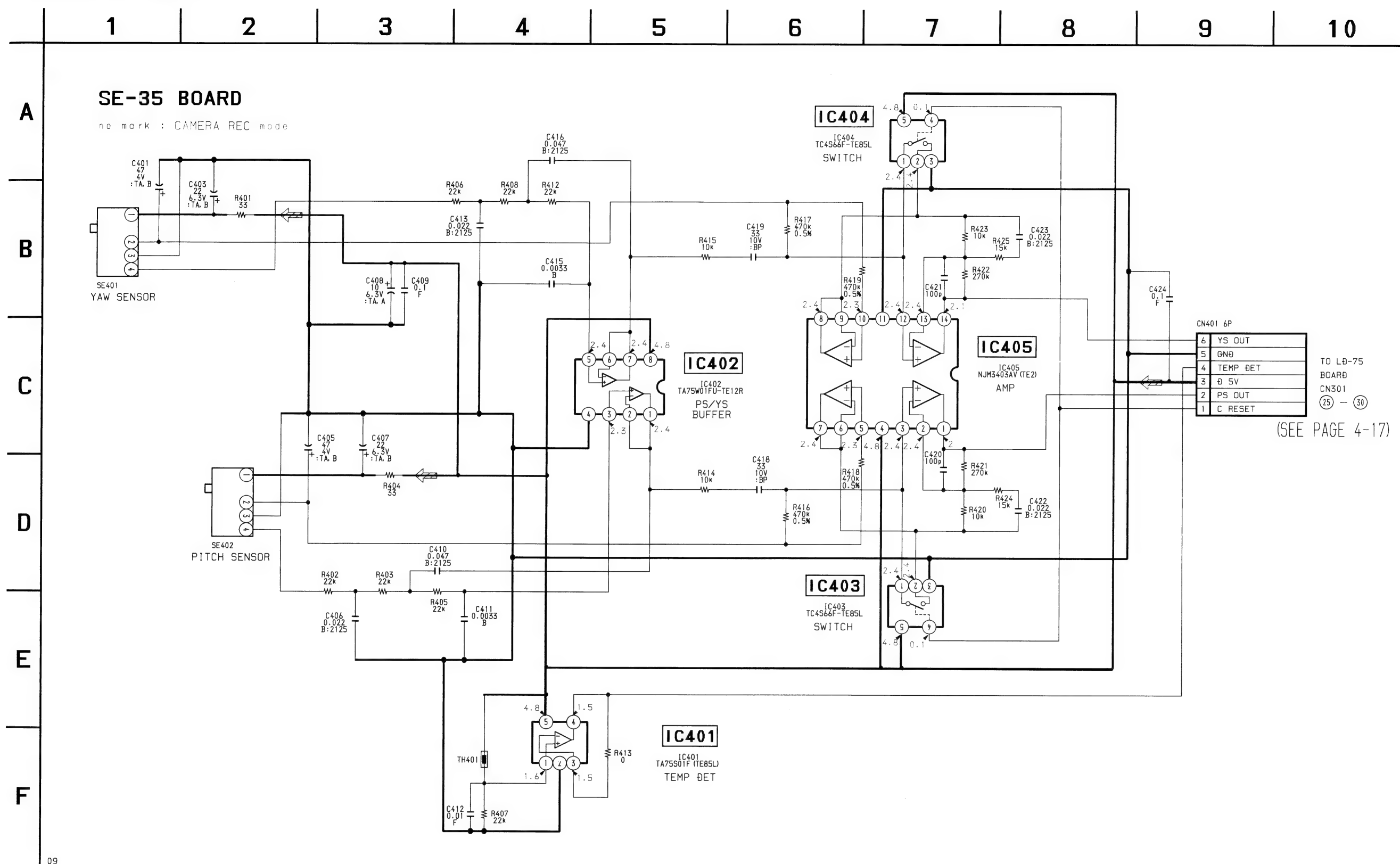
SE-35 (STEADY SHOT SENSOR) SCHEMATIC DIAGRAM
 — Ref. No. SE-35 BOARD: 1000 series —



in this model is

SE-35 (STEADY SHOT SENSOR) SCHEMATIC DIAGRAM

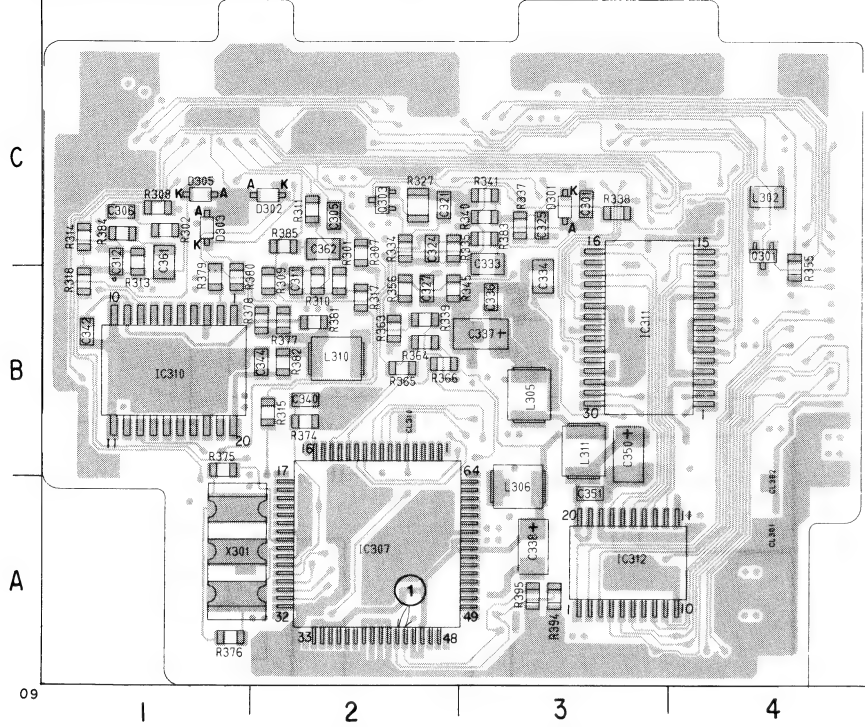
— Ref. No. SE-35 BOARD: 1000 series —



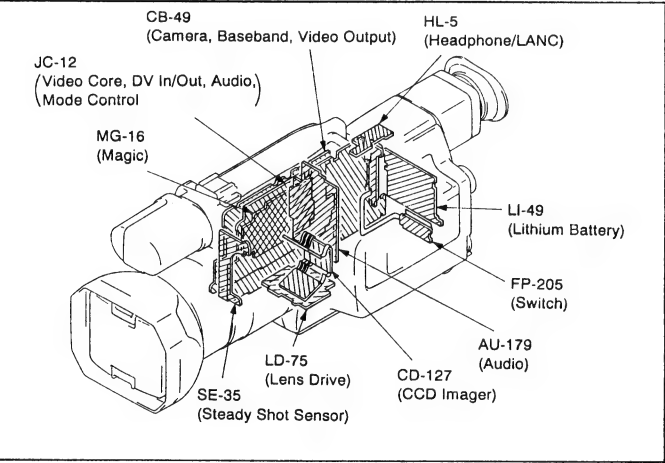
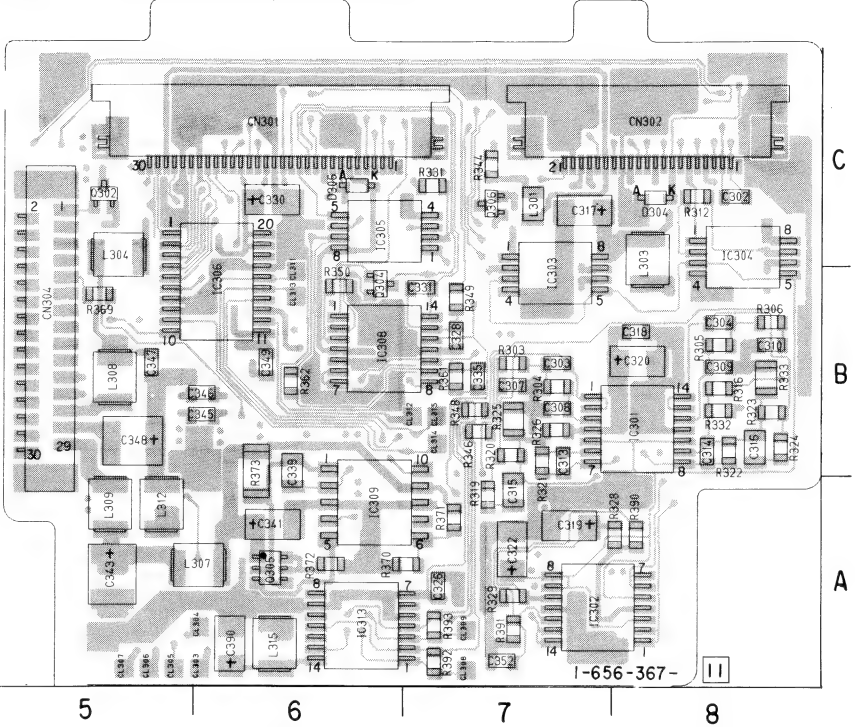
LD-75 (LENS DRIVE) PRINTED WIRING BOARD
— Ref. No. LD-75 BOARD: 1000 series —

There are few cases that the part isn't mounted in this model is printed on this diagram.

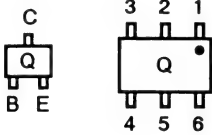
LD-75 BOARD (COMPONENT SIDE)



LD-75 BOARD (CONDUCTOR SIDE)



- For printed wiring boards.
- This board is four-layer print board. However, the patterns of layers 2 to 3 have not been included in the diagram.
- Chip transistor

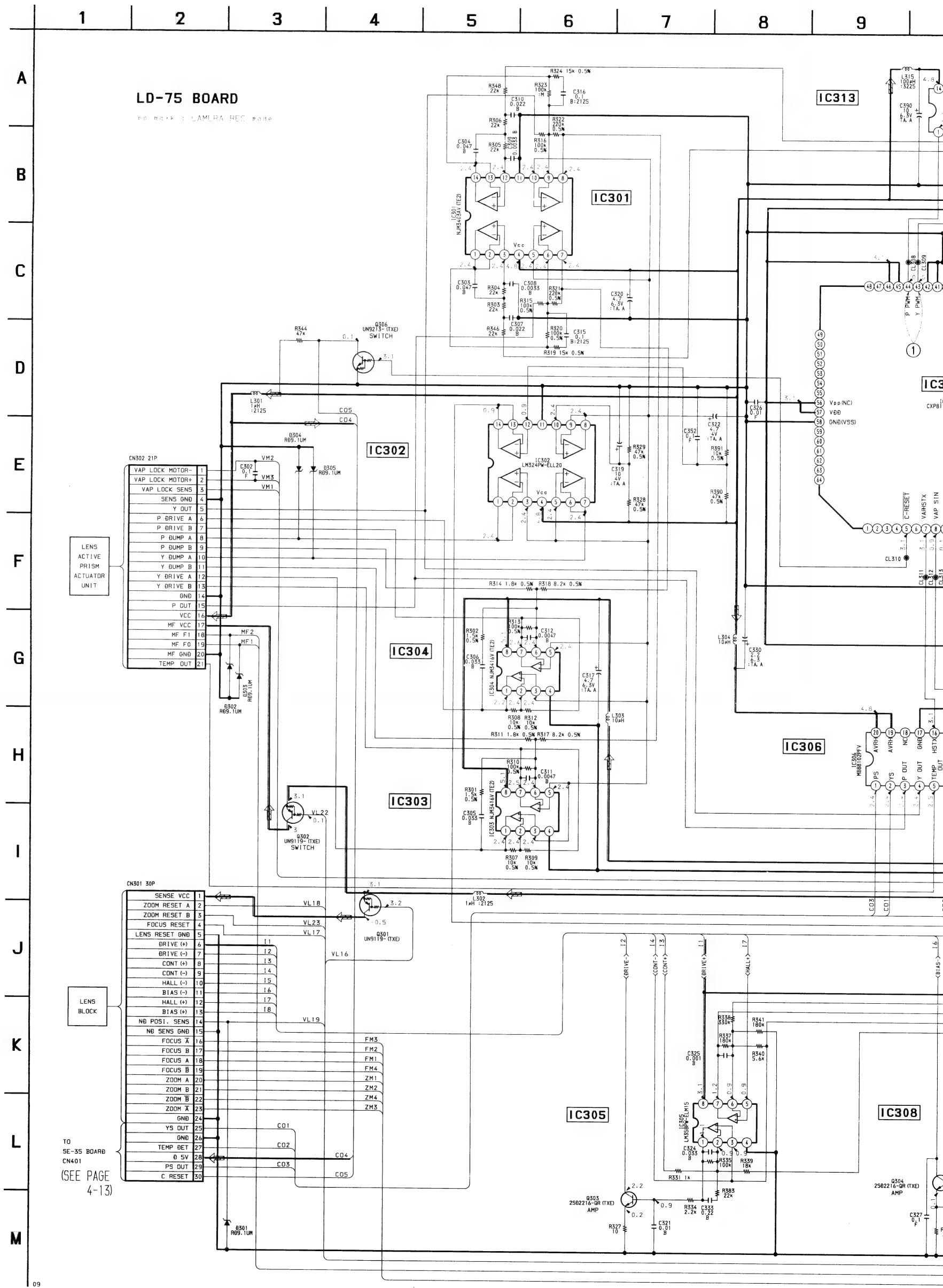
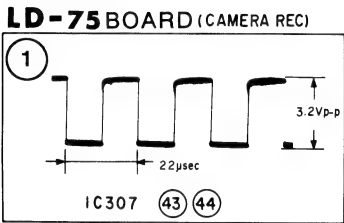


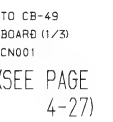
LD-75 BOARD

C302	C-8	R321	B-7
C303	B-7	R322	B-8
C304	B-8	R323	B-8
C305	C-2	R324	B-8
C306	C-1	R327	C-2
C307	B-7	R328	A-8
C308	B-7	R329	A-7
C309	B-8	R331	C-7
C310	B-8	R334	C-2
C311	B-2	R335	C-2
C312	C-1	R337	C-3
C315	A-7	R338	C-3
C316	B-8	R339	B-2
C317	C-7	R340	C-3
C319	A-7	R341	C-3
C320	B-8	R344	C-7
C321	C-2	R345	B-2
C322	A-7	R346	B-7
C324	C-2	R348	B-7
C325	C-3	R349	B-7
C326	A-7	R350	B-6
C327	B-2	R355	B-4
C328	B-7	R356	B-7
C330	C-6	R361	B-7
C331	B-7	R362	B-6
C333	C-3	R363	B-6
C334	B-3	R364	B-6
C335	B-7	R365	B-6
C336	B-3	R366	B-6
C337	B-3	R369	B-6
C338	A-3	R370	A-7
C339	B-6	R371	A-7
C340	B-2	R372	A-6
C341	A-6	R373	B-6
C342	B-1	R374	B-2
C343	A-5	R375	B-1
C344	B-2	R376	A-1
C345	B-6	R377	B-2
C346	B-6	R378	B-2
C347	B-5	R379	B-1
C348	B-5	R380	B-1
C349	B-6	R381	B-2
C350	B-3	R382	B-2
C351	A-3	R383	C-3
C352	A-7	R390	A-8
C390	A-6	R391	A-7
CN301	C-6	X301	A-1
CN302	C-8		
CN304	B-5		
D301	C-3		
D302	C-2		
D303	C-1		
D304	C-8		
D305	C-1		
IC301	B-8		
IC302	A-7		
IC303	B-7		
IC304	C-8		
IC305	C-6		
IC306	B-6		
IC307	A-2		
IC308	B-6		
IC309	A-6		
IC310	B-1		
IC311	B-3		
IC312	A-3		
IC313	A-6		
L301	C-7		
L302	C-4		
L303	C-8		
L304	C-5		
L305	B-3		
L306	A-3		
L307	A-6		
L308	B-5		
L309	A-5		
L310	B-2		
L311	B-3		
L312	A-5		
L315	A-6		
Q301	C-4		
Q302	C-5		
Q303	C-2		
Q304	B-6		
Q305	A-6		
Q306	C-7		
R301	B-2		
R302	C-1		
R303	B-7		
R304	B-7		
R305	B-8		
R306	B-8		
R307	C-2		
R308	C-1		
R309	B-2		
R310	B-2		
R311	C-2		
R312	C-8		
R313	C-1		
R314	C-1		
R315	B-2		
R316	B-8		
R317	B-2		
R318	B-1		
R319	A-7		
R320	B-7		

LD-75 (LENS DRIVE) SCHEMATIC DIAGRAM

— Ref. No. LD-75 BOARD: 1000 series —





DCR-VX1000/VX1000E

CB-49 (CAMERA, BASEBAND, VIDEO OUTPUT) PRINTED WIRING BOARD

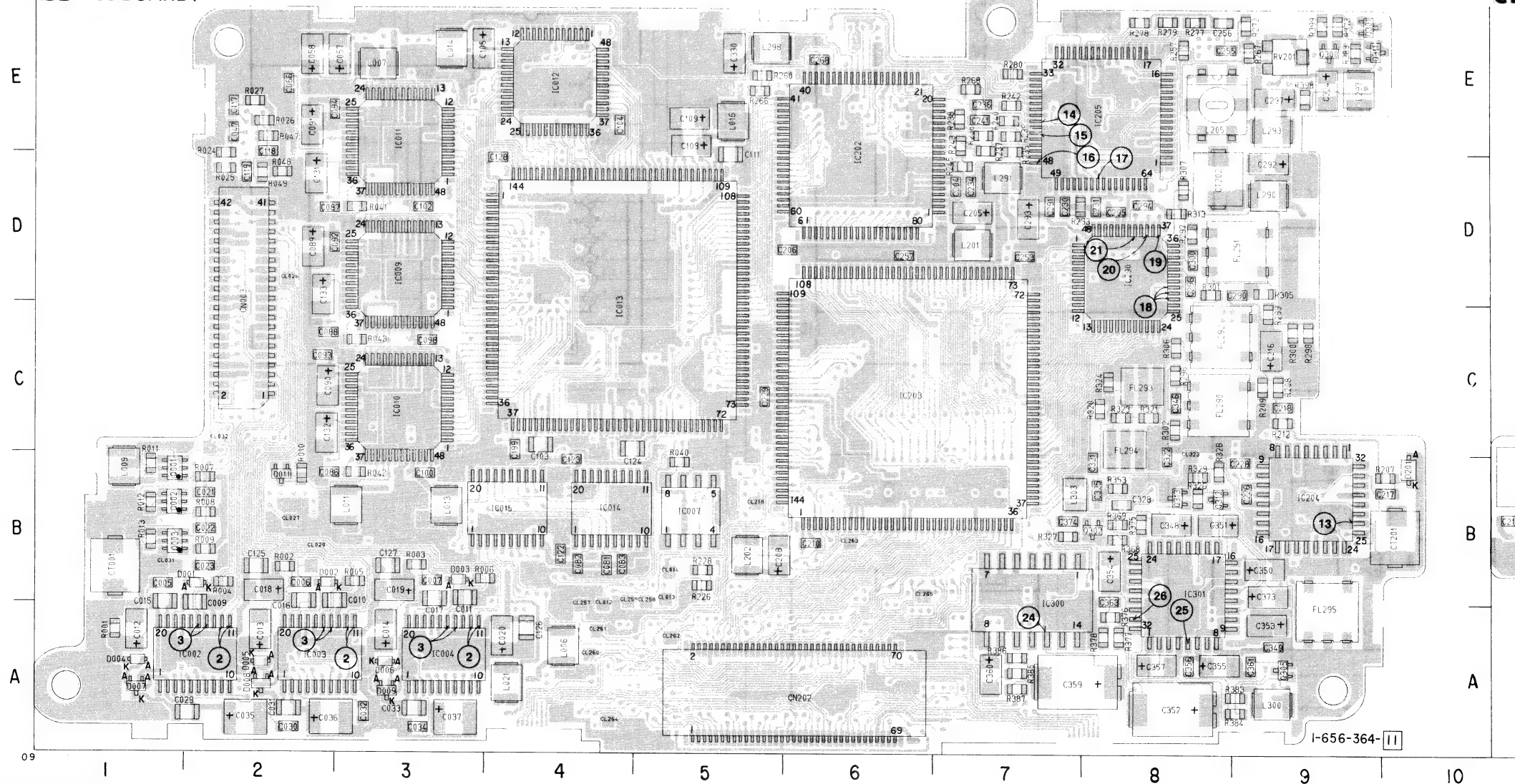
— Ref. No. CB-49 BOARD: 2000 series —

There are few cases that the part isn't mounted in this model is printed on this diagram.

CB-49 BOARD

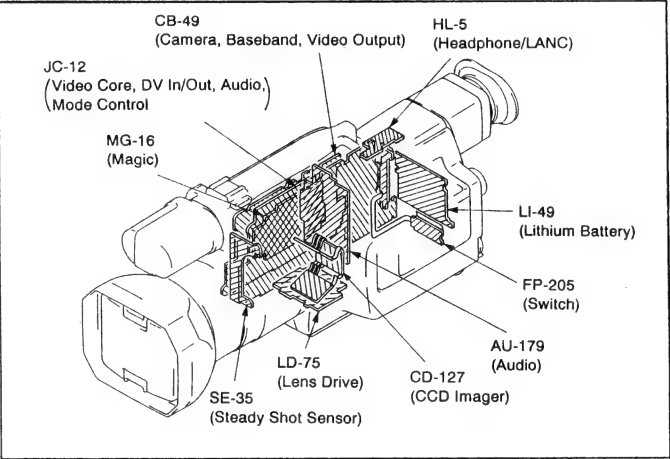
C001	A-16	C042	D-18	C077	C-18	C110	C-15	C217	B-10	C266	B-14	C320	B-12	C353	A-9	D002	B-2	IC014	B-4	L007	E-3	L297	E-9	Q311	E-
C002	A-15	C044	E-17	C078	C-18	C111	D-5	C218	C-9	C267	A-14	C321	B-8	C354	B-8	D003	B-3	IC015	B-4	L008	A-18	L298	E-5	Q312	B-
C004	A-15	C045	A-18	C079	C-17	C112	E-16	C219	C-11	C268	E-6	C322	B-8	C355	A-8	D004	A-1	IC016	D-15	L009	B-1	L299	E-14	Q313	B-
C005	B-1	C046	A-18	C080	C-17	C113	D-15	C221	B-11	C290	D-9	C323	B-12	C356	A-8	D005	A-2	IC017	E-15	L010	B-17	L300	A-9		
C006	B-2	C047	E-2	C081	B-4	C114	E-16	C225	C-11	C291	D-7	C324	E-9	C357	A-8	D006	A-3	IC018	E-16	L011	B-3	L301	A-13	R001	A-
C007	B-3	C048	D-18	C082	B-4	C117	E-2	C226	B-9	C292	D-9	C325	B-8	C358	B-13	D007	A-1	IC019	D-17	L012	D-16	L302	E-14	R002	B-
C012	A-1	C049	D-18	C083	B-4	C121	B-17	C227	B-11	C293	D-7	C326	C-13	C359	A-7	D008	A-2	IC201	D-14	L013	B-3			R003	B-
C013	A-2	C050	B-19	C084	C-18	C122	B-4	C228	B-9	C294	D-8	C327	B-13	C360	A-7	D009	A-3	IC202	D-6	L014	E-3	Q001	B-1	R004	B-
C014	A-3	C051	C-18	C085	C-18	C123	B-4	C229	C-5	C295	D-8	C328	B-8	C361	A-9	D201	B-10	IC203	C-6	L015	C-15	Q002	B-1	R005	B-
C015	B-1	C052	B-19	C086	B-2	C124	C-4	C231	D-8	C296	D-8	C329	D-14	C362	B-13	D202	D-12	IC204	B-9	L016	E-5	Q003	B-1	R006	B-
C016	B-2	C053	C-17	C087	D-2	C125	B-2	C233	E-13	C297	E-9	C330	E-5	C363	B-8	D297	D-13	IC205	E-8	L017	E-16	Q011	B-2	R007	B-
C017	B-3	C054	D-18	C088	C-2	C126	A-4	C235	E-13	C298	D-13	C331	B-13	C364	A-13			IC207	E-13	L018	C-18	Q290	A-12	R008	B-
C020	A-4	C055	D-17	C089	D-2	C127	B-3	C237	E-13	C299	D-11	C332	B-12	C365	D-14	FL290	C-8	IC290	D-8	L019	C-18	Q291	A-12	R009	B-
C021	B-2	C056	E-17	C090	C-2	C128	D-4	C238	D-13	C300	D-8	C333	B-12	C366	D-12	FL291	D-9	IC291	D-13	L021	A-4	Q292	D-13	R010	B-
C022	B-2	C057	E-3	C091	E-2	C129	D-17	C244	E-12	C301	C-14	C334	B-13	C367	D-12	FL292	C-8	IC292	D-12	L201	D-7	Q293	D-12	R011	B-
C023	B-2	C058	E-2	C092	D-2	C130	D-17	C245	E-12	C302	C-14	C335	B-12	C368	E-11	FL293	C-8	IC293	C-14	L202	B-5	Q294	D-12	R012	B-
C024	B-16	C059	E-17	C093	C-2	C131	D-2	C246	E-12	C303	D-11	C336	B-12	C369	E-11	FL294	C-8	IC294	B-12	L203	C-11	Q295	D-11	R013	B-
C025	A-16	C060	B-19	C094	E-2	C132	C-2	C247	E-12	C304	C-13	C337	E-14	C370	E-11	FL295	A-9	IC295	E-14	L205	E-8	Q296	E-11	R016	B-
C026	B-18	C061	B-17	C095	D-16	C133	D-2	C248	D-12	C305	D-12	C338	D-14	C372	C-14			IC296	D-14	L206	D-13	Q297	E-11	R017	B-
C027	B-18	C062	C-17	C096	C-17	C199	C-4	C249	D-13	C306	D-11	C339	E-14	C373	B-9	IC001	B-16	IC297	D-14	L207	A-13	Q298	C-13	R018	B-
C028	C-18	C063	B-19	C098	C-3	C203	D-14	C250	E-13	C307	C-11	C340	B-13			IC002	A-2	IC298	C-14	L208	A-13	Q299	E-12	R019	B-
C029	A-2	C064	E-17	C099	C-17	C204	D-7	C251	E-12	C309	C-12	C341	B-12	CN001	A-17	IC003	A-2	IC299	A-12	L209	A-13	Q300	E-9	R020	A-
C030	A-2	C066	E-2	C100	B-3	C205	D-7	C253	D-7	C310	C-12	C342	A-12	CN002	A-15	IC004	A-3	IC300	B-7	L210	A-14	Q301	E-9	R021	B-
C031	A-2	C067	C-17	C101	D-17	C206	D-6	C255	E-8	C311	C-12	C343	C-14	CN003	D-2	IC005	D-18	IC301	B-8	L211	A-14	Q302	B-8	R022	B-
C032	A-3	C068	D-17	C102	D-3	C208	B-5	C257	D-6	C312	D-12	C344	A-12	CN202	A-6	IC006	B-18	IC302	D-13	L212	A-14	Q303	B-13	R023	A-
C033	A-3	C069	D-17	C103	C-4	C209	C-11	C258	E-13	C313	C-12	C345	B-12	CN290	E-11	IC007	B-5			L213	A-14	Q304	A-11	R024	D-
C034	A-3	C070	B-18	C104	E-4	C210	B-6	C259	D-13	C314	C-13	C347	B-13			IC008	D-16	L001	A-15	L290	D-9	Q305	A-9	R025	D-
C035	A-2	C071	E-17	C105	E-3	C211	B-11	C261	A-13	C315	C-12	C348	B-8	CT001	B-1	IC009	D-3	L002	A-15	L291	D-7	Q306	A-11	R026	E-
C036	A-2	C072	E-17	C106	C-15	C213	B-10	C262	A-13	C316	C-12	C349	A-9	CT201	B-10	IC010	C-3	L003	A-16	L292	D-13	Q307	A-11	R028	B-
C037	A-3	C073	E-17	C107	D-15	C214	B-11	C263	B-13	C317	C-12	C350	B-9	CT202	D-8	IC011	E-3	L004	A-15	L293	E-9	Q308	C-13	R029	B-
C038	B-15	C075	C-18	C108	E-5	C215	B-11	C264	B-14	C318	C-13	C351	B-8			IC012	E-4	L005	A-15	L294	B-12	Q309	C-13	R030	B-
C040	E-18	C076	B-18	C109	E-5	C216	C-9	C265	B-14	C319	C-12	C352	A-8	D001	B-2	IC013	C-4	L006	A-4	L295	C-14	Q310	E-11	R031	B-

CB-49 BOARD (COMPONENT SIDE)

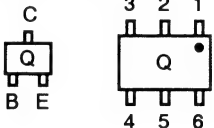


Model is

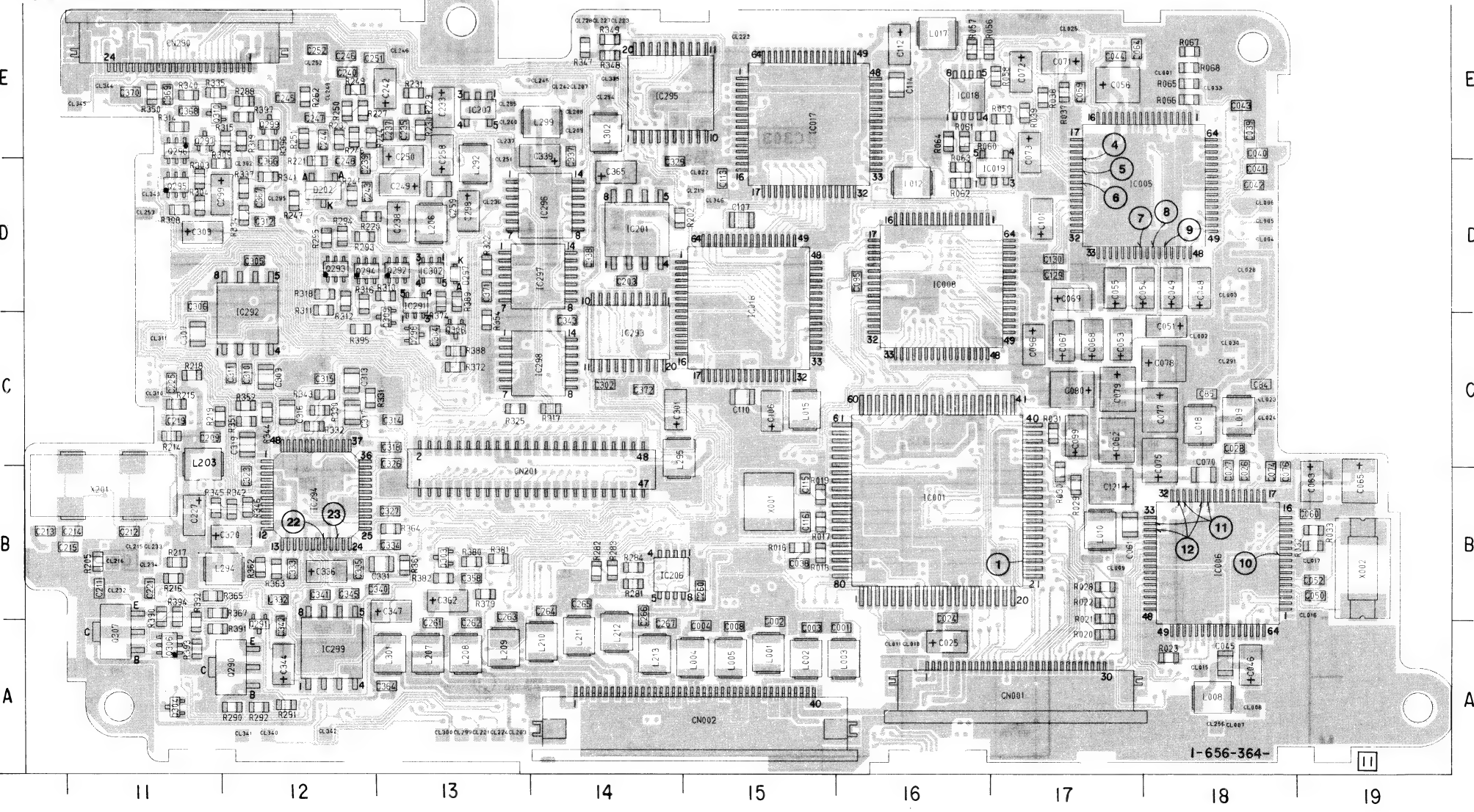
311	E-9	R032	B-19	R229	E-13	R299	C-9	R337	D-12	R383	A-9
312	B-8	R037	E-17	R230	E-13	R300	C-9	R340	E-11	R384	A-9
313	B-8	R038	E-17	R232	E-12	R301	D-8	R341	D-12	R385	A-7
		R039	E-17	R233	D-7	R302	C-8	R342	B-12	R386	A-7
001	A-1	R040	B-5	R235	E-7	R303	D-11	R343	C-12	R387	A-7
002	B-2	R041	D-3	R236	E-7	R304	D-11	R344	C-12	R388	C-13
003	B-3	R042	B-3	R239	E-7	R305	D-9	R345	B-11	R389	D-13
004	B-2	R043	C-3	R240	E-7	R306	C-8	R346	B-12	R390	B-11
005	B-3	R047	E-2	R241	D-12	R308	D-11	R347	E-14	R391	A-11
006	B-4	R049	D-2	R242	E-7	R309	D-11	R348	E-14	R392	A-11
007	B-2	R056	E-17	R244	E-12	R310	D-13	R349	E-14	R393	A-11
008	B-2	R058	E-17	R245	D-7	R311	D-12	R350	E-11	R394	B-11
009	B-2	R059	E-17	R251	E-12	R312	D-12	R351	C-12	R395	C-12
010	B-2	R060	E-16	R257	E-8	R314	E-11	R354	C-13	R396	E-12
011	B-1	R062	D-16	R260	E-5	R315	E-12	R361	B-13	R397	E-12
012	B-1	R063	D-16	R266	E-5	R316	D-12	R363	B-12	R398	E-9
013	B-1	R065	E-18	R268	E-7	R317	C-14	R364	B-13	R399	E-9
016	B-15	R066	E-18	R272	E-9	R318	D-12	R365	B-11		
017	B-15	R068	E-18	R278	E-8	R319	E-12	R367	B-11		
018	B-15	R069	E-18	R283	B-14	R320	C-8	R368	B-8		
019	B-15	R205	B-11	R284	B-14	R321	C-8	R369	B-8		
020	A-17	R207	B-10	R288	E-9	R322	D-13	R372	C-13		
021	B-17	R208	C-9	R289	E-9	R323	C-8	R373	D-13		
022	A-18	R209	C-9	R290	A-12	R324	C-8	R375	B-8		
023	D-2	R212	C-11	R292	A-12	R325	A-13	R376	A-8		
024	D-2	R214	C-11	R293	D-12	R326	B-8	R377	A-8		
025	D-2	R215	C-11	R294	D-12	R328	B-8	R378	A-8		
026	E-2	R217	B-11	R295	D-12	R329	B-8	R379	B-13		
028	B-17	R219	C-11	R296	C-8	R330	C-12	R380	B-13		
029	B-17	R220	D-12	R297	D-8	R332	C-12	R381	B-13		
030	B-17	R221	D-12	R298	C-9	R334	D-12	R382	B-13		
031	C-17	R228	B-5	R299	C-9	R335	E-11				



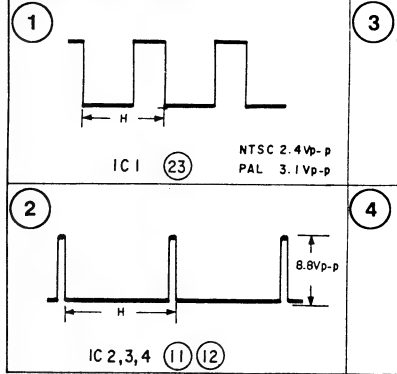
- For printed wiring boards.
- This board is a six-layer print board. However, the pattern of layers 2 to 5 have not been included in the diagram.
- Chip transistor



CB-49 BOARD (CONDUCTOR SIDE)



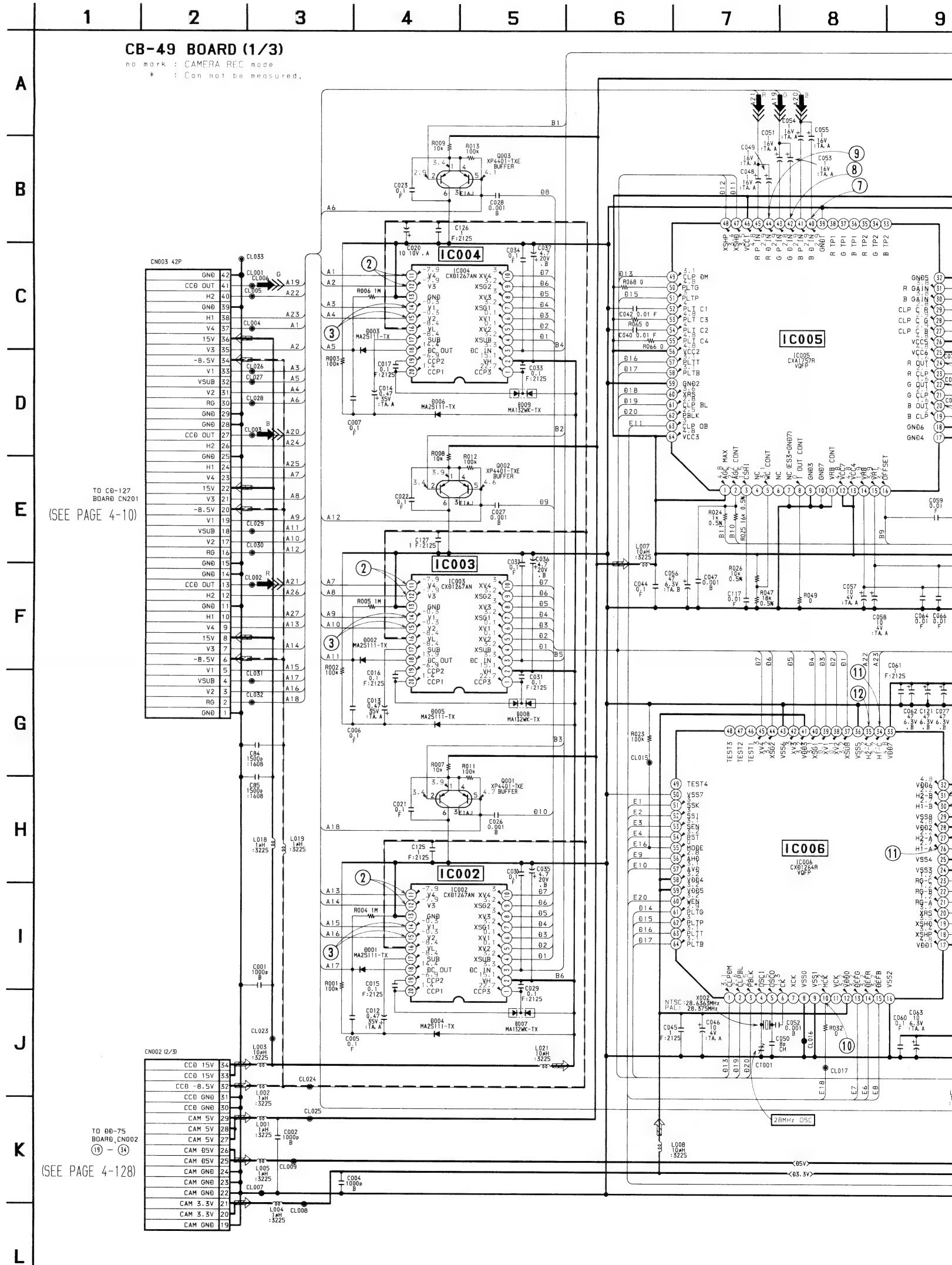
CB-49 BOARD (1/3) (CAMERA REC)



DCR-VX1000 : NTSC model
DCR-VX1000E : PAL model

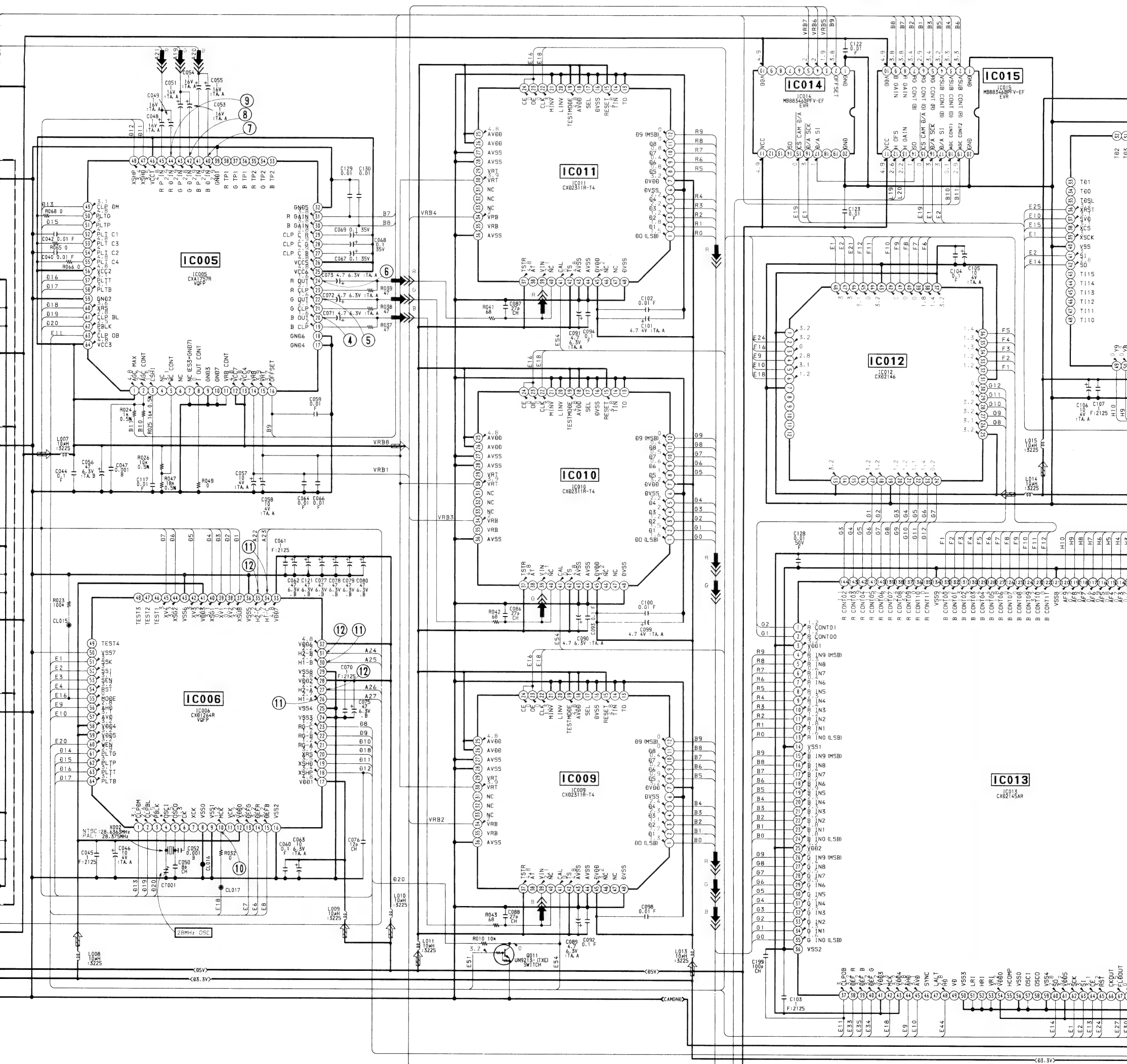
CB-49 (CAMERA) SCHEMATIC DIAGRAM

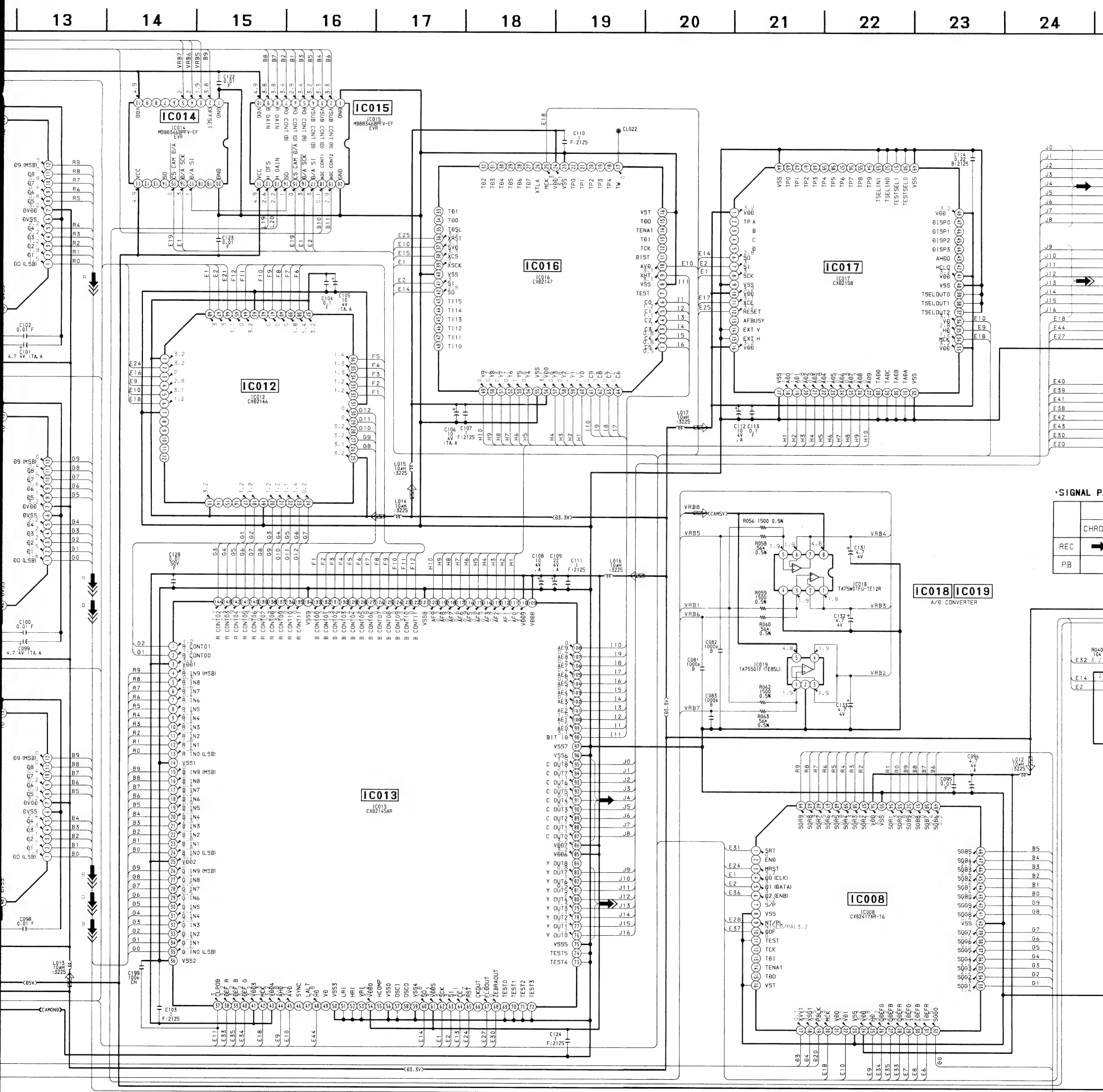
— Ref. No. CB-49 BOARD: 2000 series —



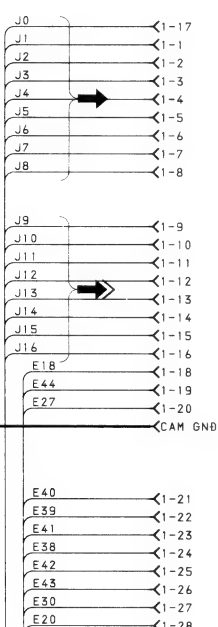
<p>1</p> <p>IC 1 (23)</p> <p>NTSC 2.4 Vp-p PAL 3.1 Vp-p</p>	<p>3</p> <p>IC 2, 3, 4 (14) (15)</p> <p>8.8 Vp-p</p>	<p>5</p> <p>IC 5 (22)</p> <p>0.8 Vp-p</p>	<p>7</p> <p>IC 5 (40)</p> <p>0.5 Vp-p</p>	<p>9</p> <p>IC 5 (44)</p> <p>0.6 Vp-p</p>	<p>11</p> <p>IC 6 (26) (30) (34)</p> <p>0.6 Vp-p</p>
<p>2</p> <p>IC 2, 3, 4 (11) (12)</p> <p>8.8 Vp-p</p>	<p>4</p> <p>IC 5 (20)</p> <p>0.23 Vp-p</p>	<p>6</p> <p>IC 5 (24)</p> <p>0.51 Vp-p</p>	<p>8</p> <p>IC 5 (42)</p> <p>0.68 Vp-p</p>	<p>10</p> <p>IC 6 (10)</p> <p>NTSC 14.318 MHz PAL 14.1875 MHz</p> <p>2.9 Vp-p</p>	<p>12</p> <p>IC 6 (27) (31) (35)</p> <p>0.6 Vp-p</p>

6	7	8	9	10	11	12	13	14	15	16	17
---	---	---	---	----	----	----	----	----	----	----	----



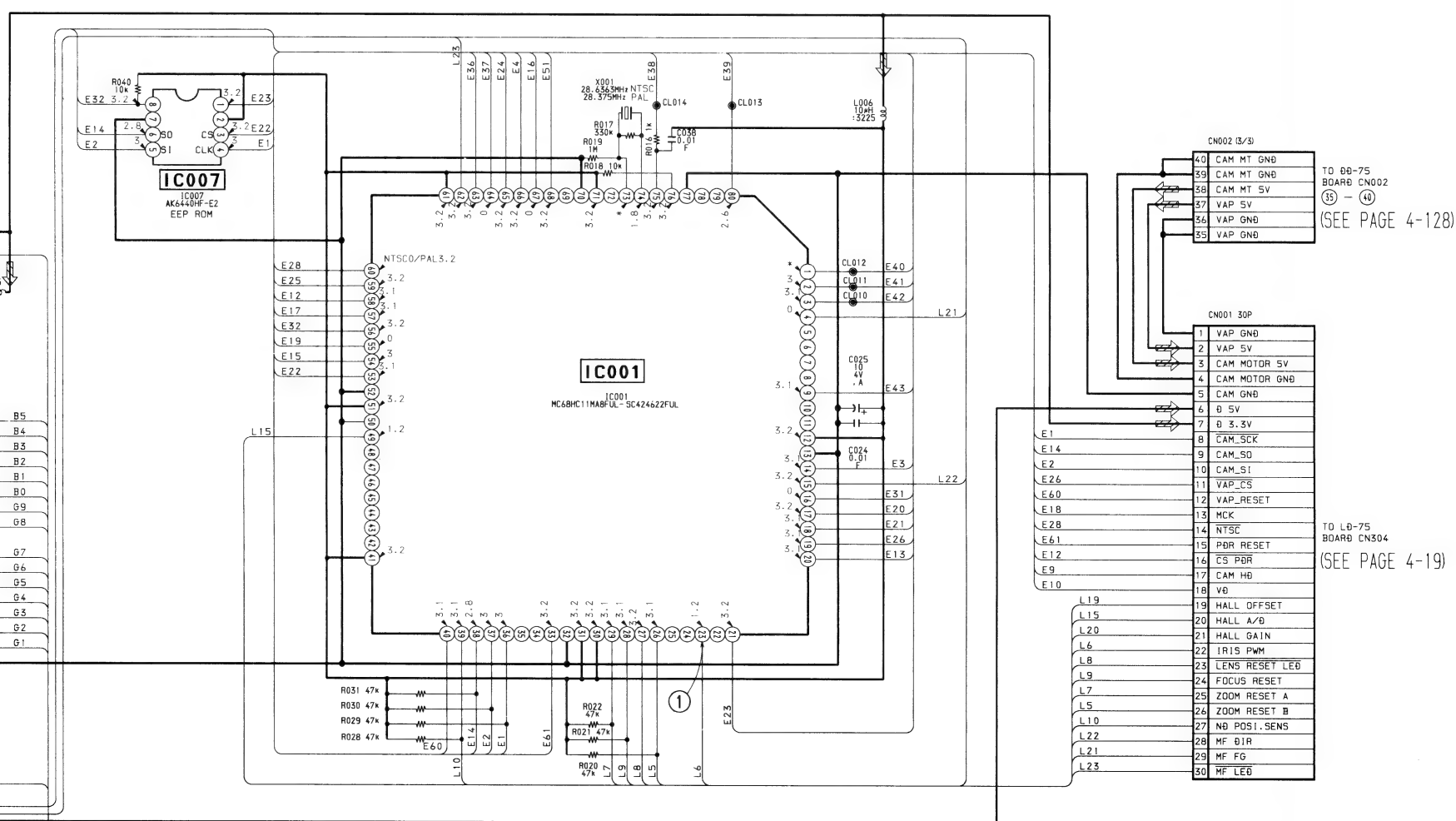


DCR-VX1000:NTSC model
DCR-VX1000E:PAL model



•SIGNAL PATH

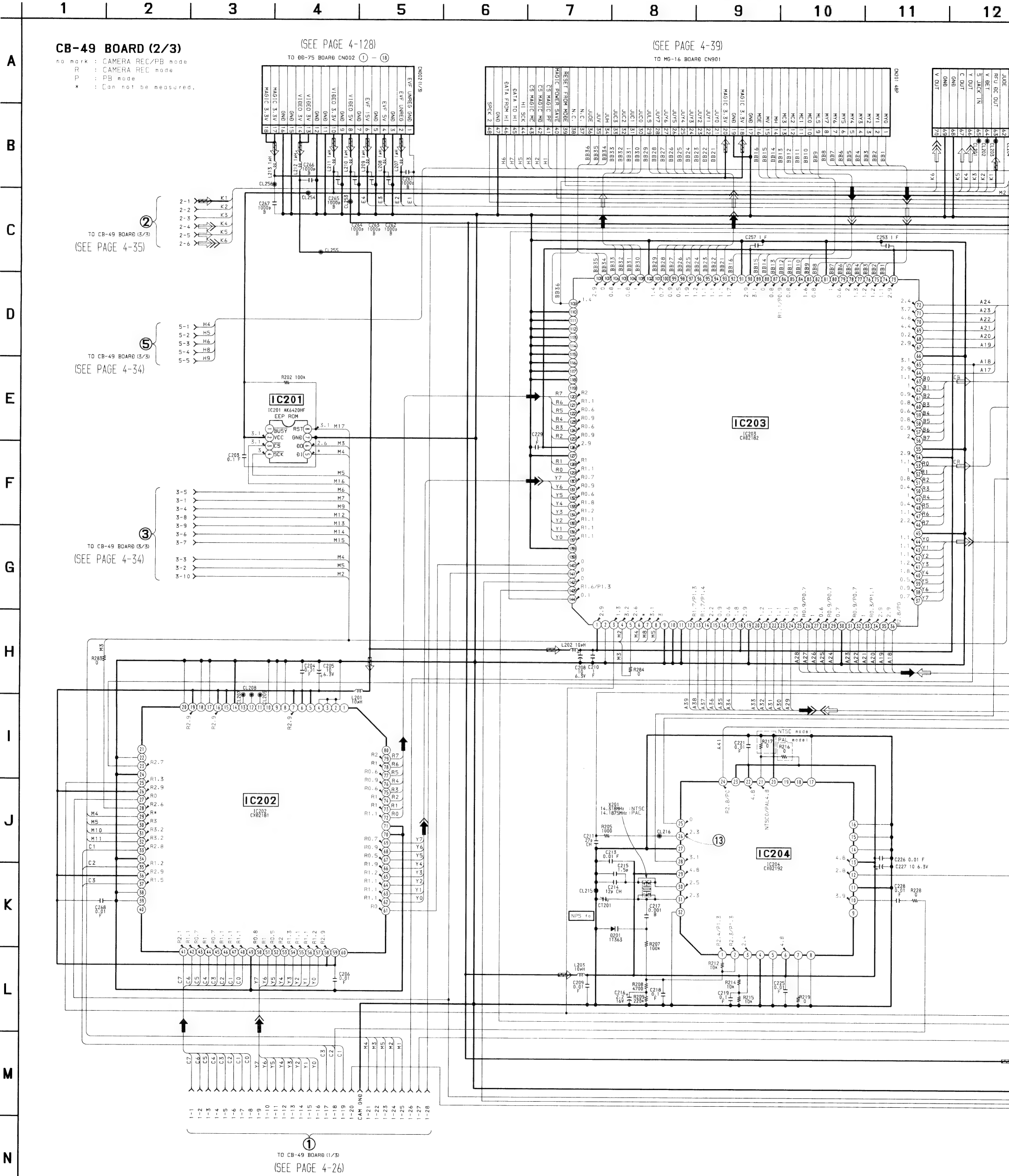
IC018 IC019

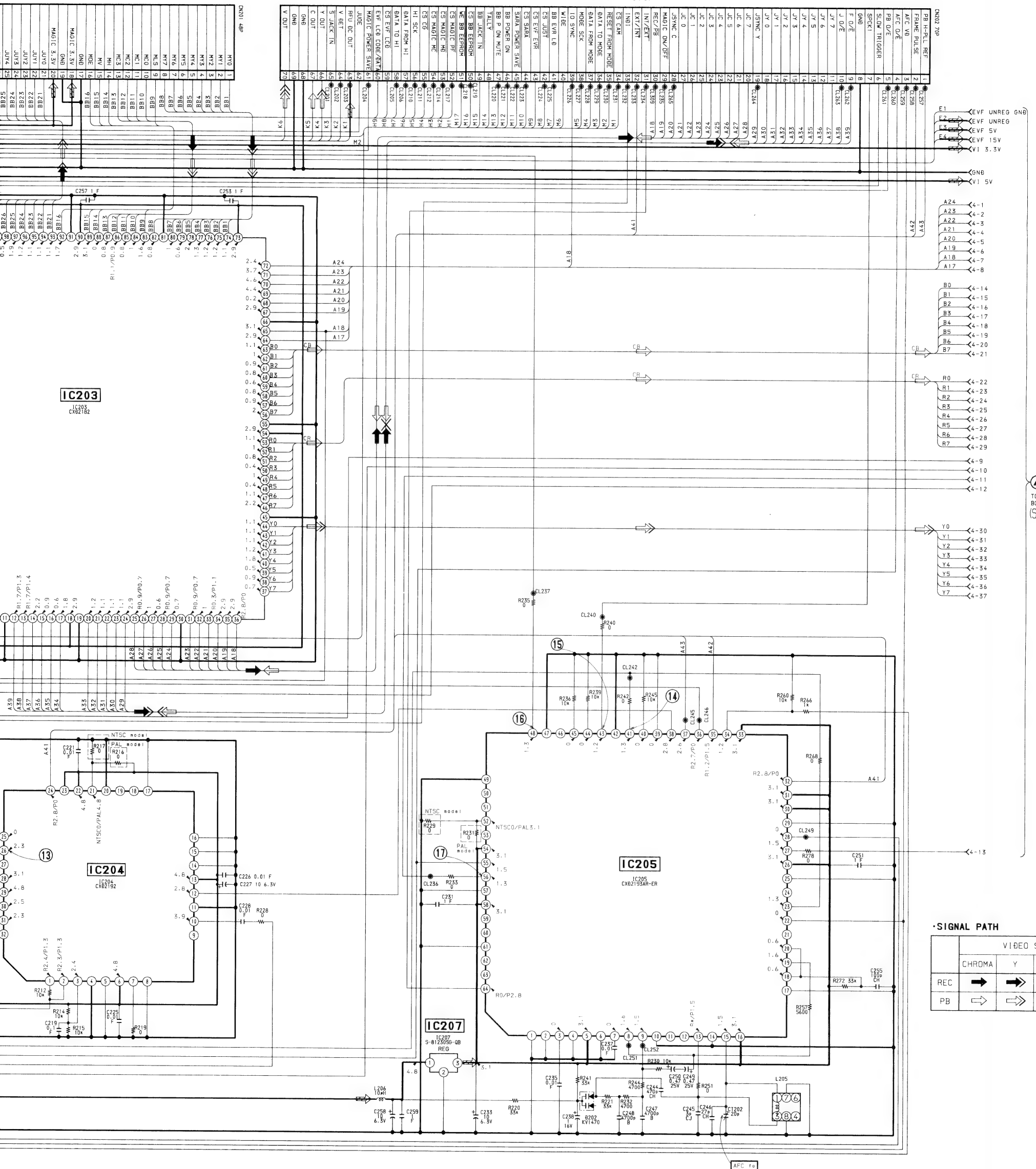


CB-49 (BASEBAND) SCHEMATIC DIAGRAM

— Ref. No. CB-49 BOARD: 2000 series —

• Refer to page 4-20 for Printed Wiring Board.





④
TO CB-49
BOARD (2/3)
(SEE PAGE 4-33)

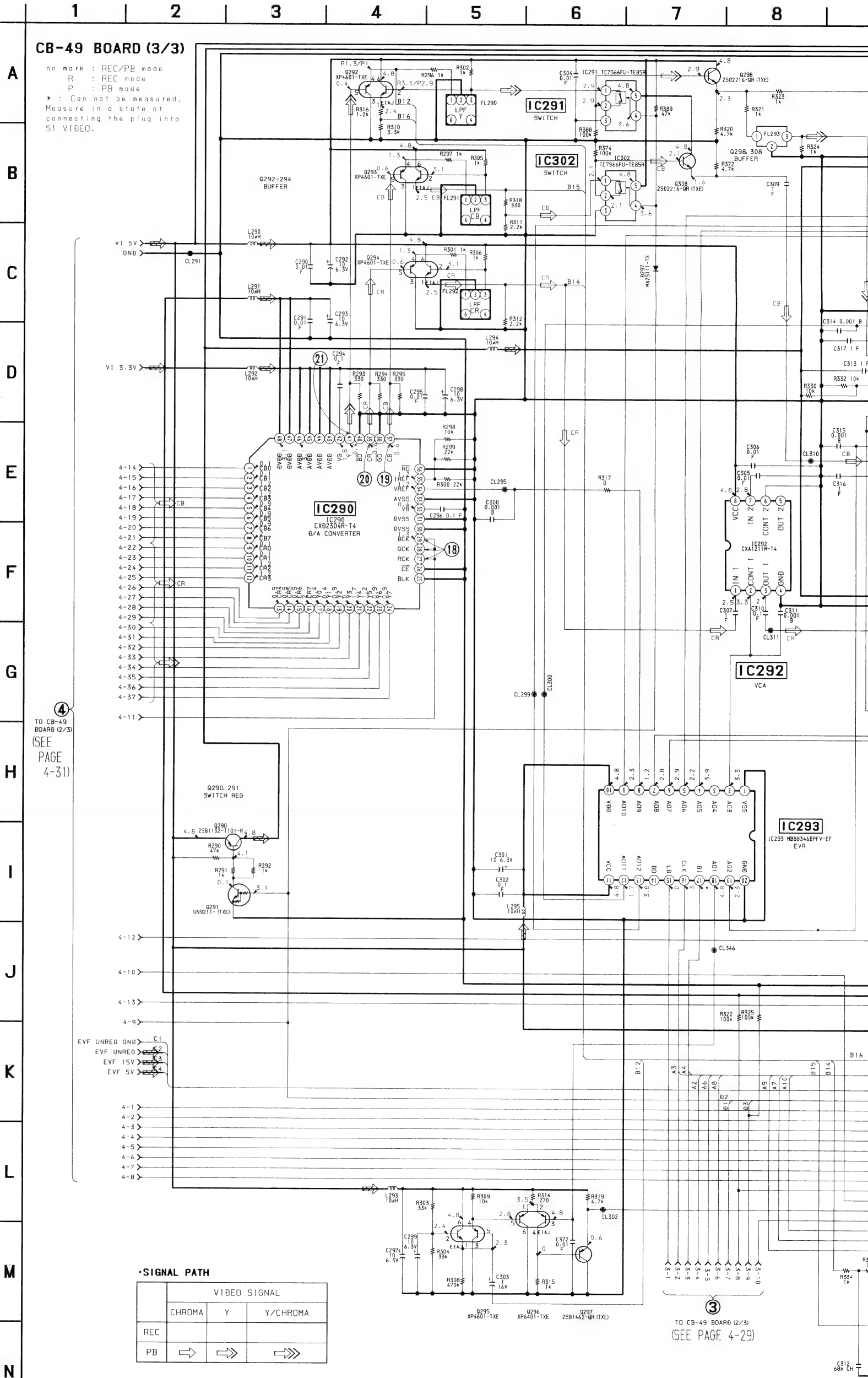
SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	→	→	→
PB	→	→	→

CB-49 (VIDEO OUTPUT) SCHEMATIC DIAGRAM

— Ref. No. CB-49 BOARD: 2000 series —

• Refer to page 4-20 for Printed Wiring Board.





DCR-VX1000/VX1000E

MG-16 (MAGIC) PRINTED WIRING BOARD

— Ref. No. MG-16 BOARD: 2000 series —

There are few cases that the part isn't mounted in this model is printed on this diagram.

MG-16 BOARD

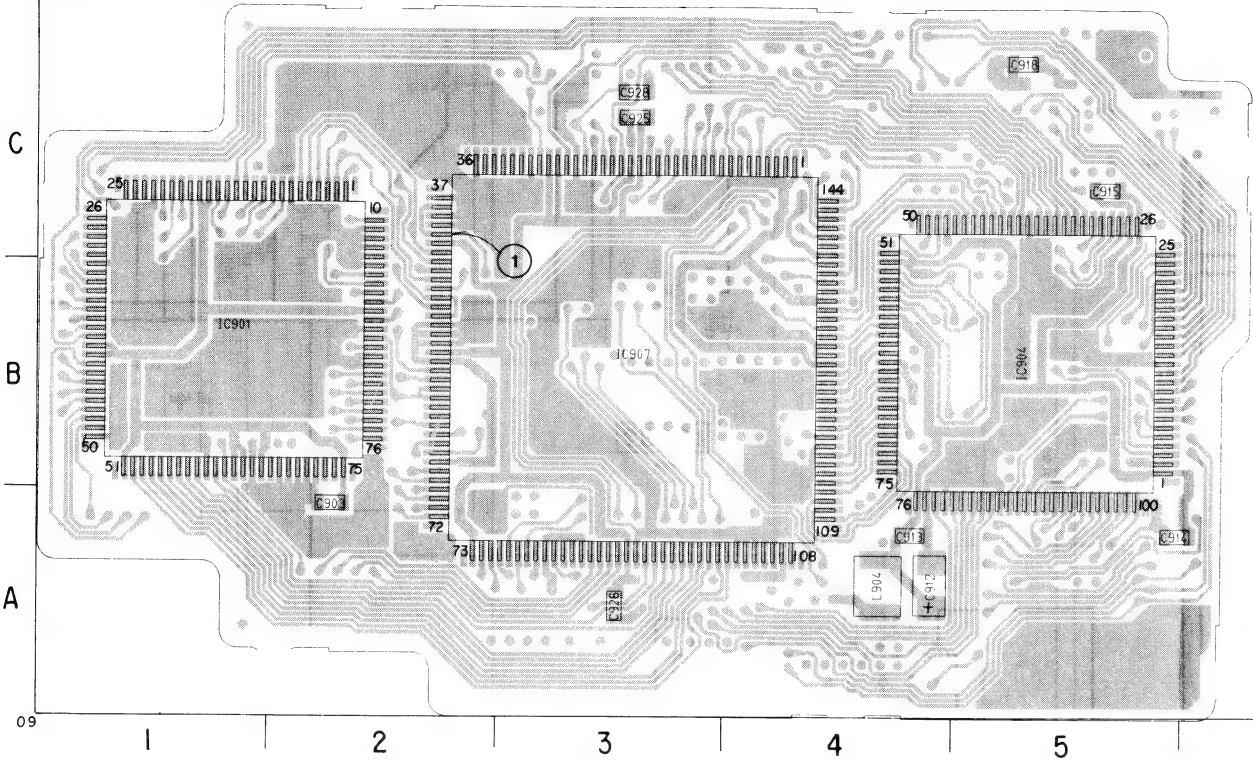
C901	B-10
C902	B-10
C903	A-2
C904	B-11
C905	B-7
C906	B-7
C907	B-7
C908	B-7
C909	A-10
C910	A-10
C911	A-10
C912	A-4
C913	A-4
C914	A-4
C915	C-5
C916	C-8
C917	C-8
C918	C-5
C919	C-6
C920	B-10
C921	B-10
C922	C-10
C923	B-9
C924	B-10
C925	C-3
C926	A-3

CN901

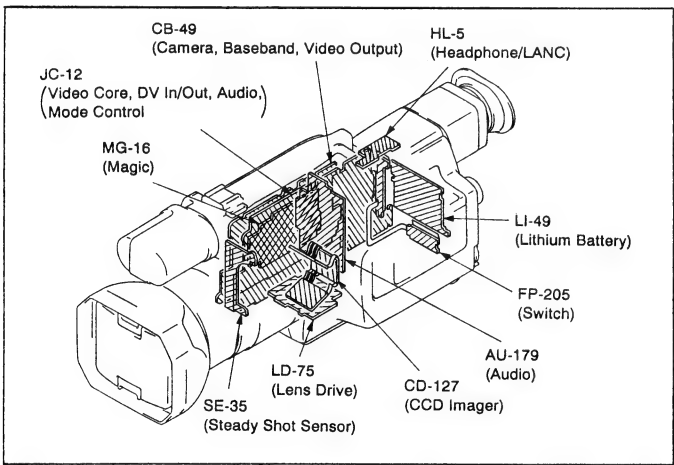
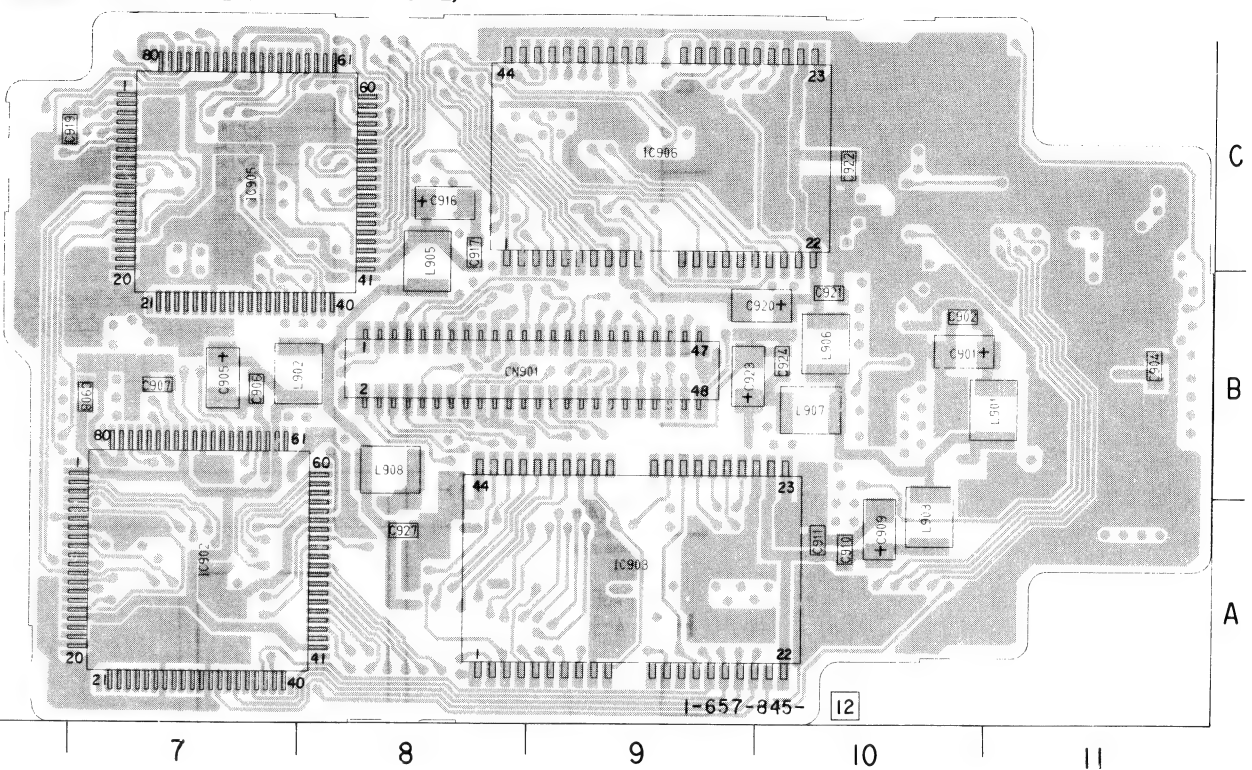
IC901
IC902
IC903
IC904
IC905
IC906
IC907

L901	B-11
L902	B-7
L903	A-10
L904	A-4
L905	C-8
L906	B-10
L907	B-10
L908	B-8

MG-16 BOARD (COMPONENT SIDE)

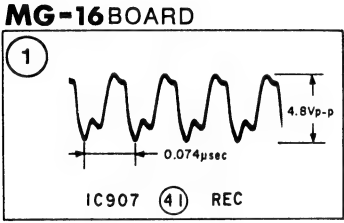
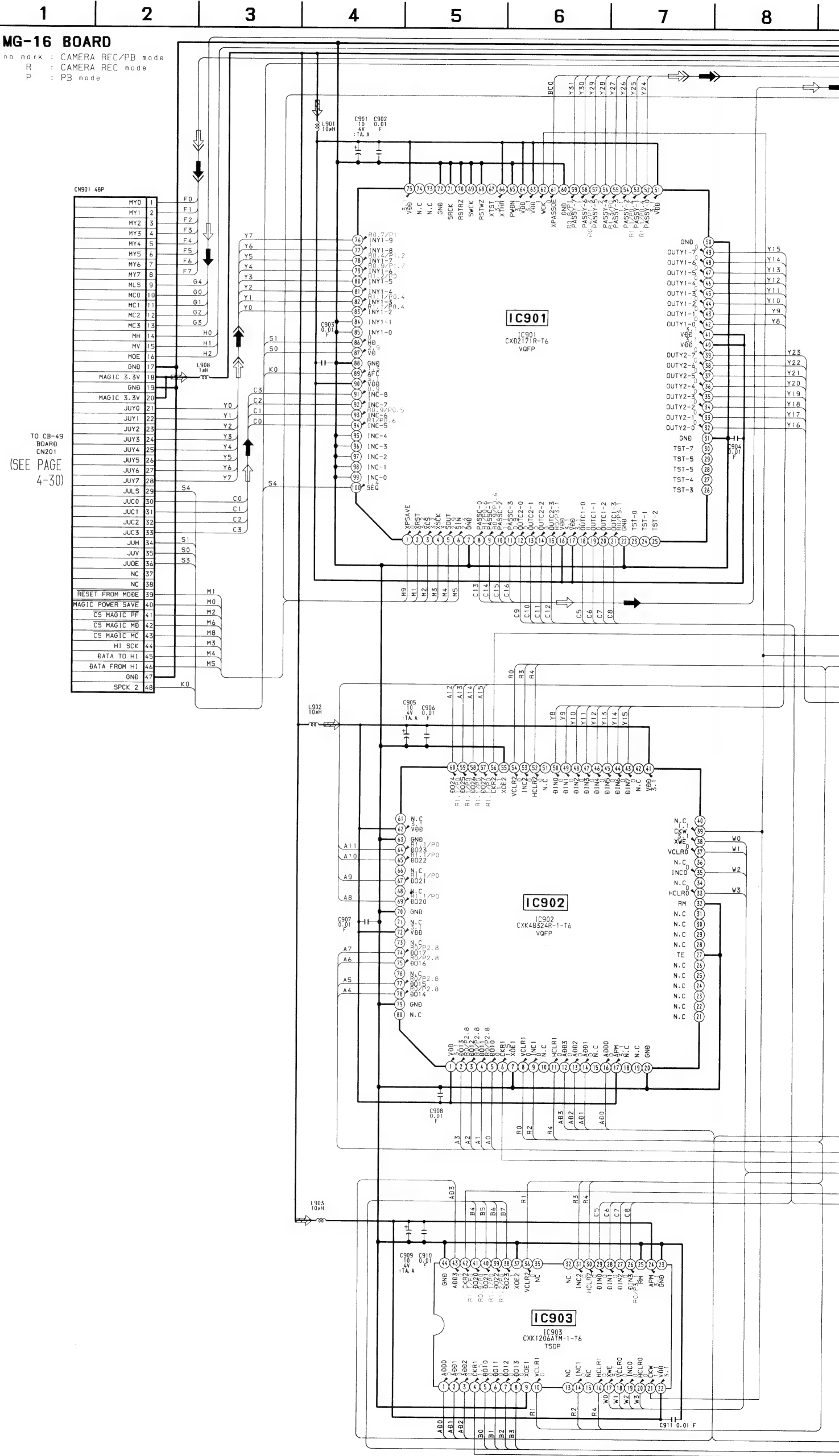


MG-16 BOARD (CONDUCTOR SIDE)



- For printed wiring boards.
- This board is a four-layer print board. However, the patterns of layers 2 to 3 have not been included in the diagram.

MG-16 (MAGIC) SCHEMATIC DIAGRAM
— Ref. No. MG-16 BOARD: 2000 series —



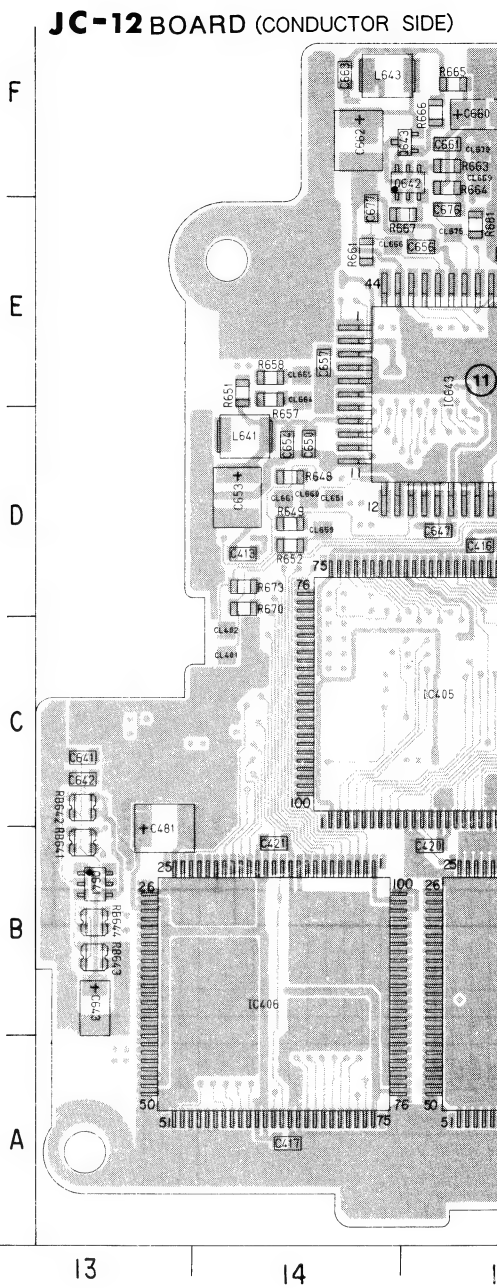
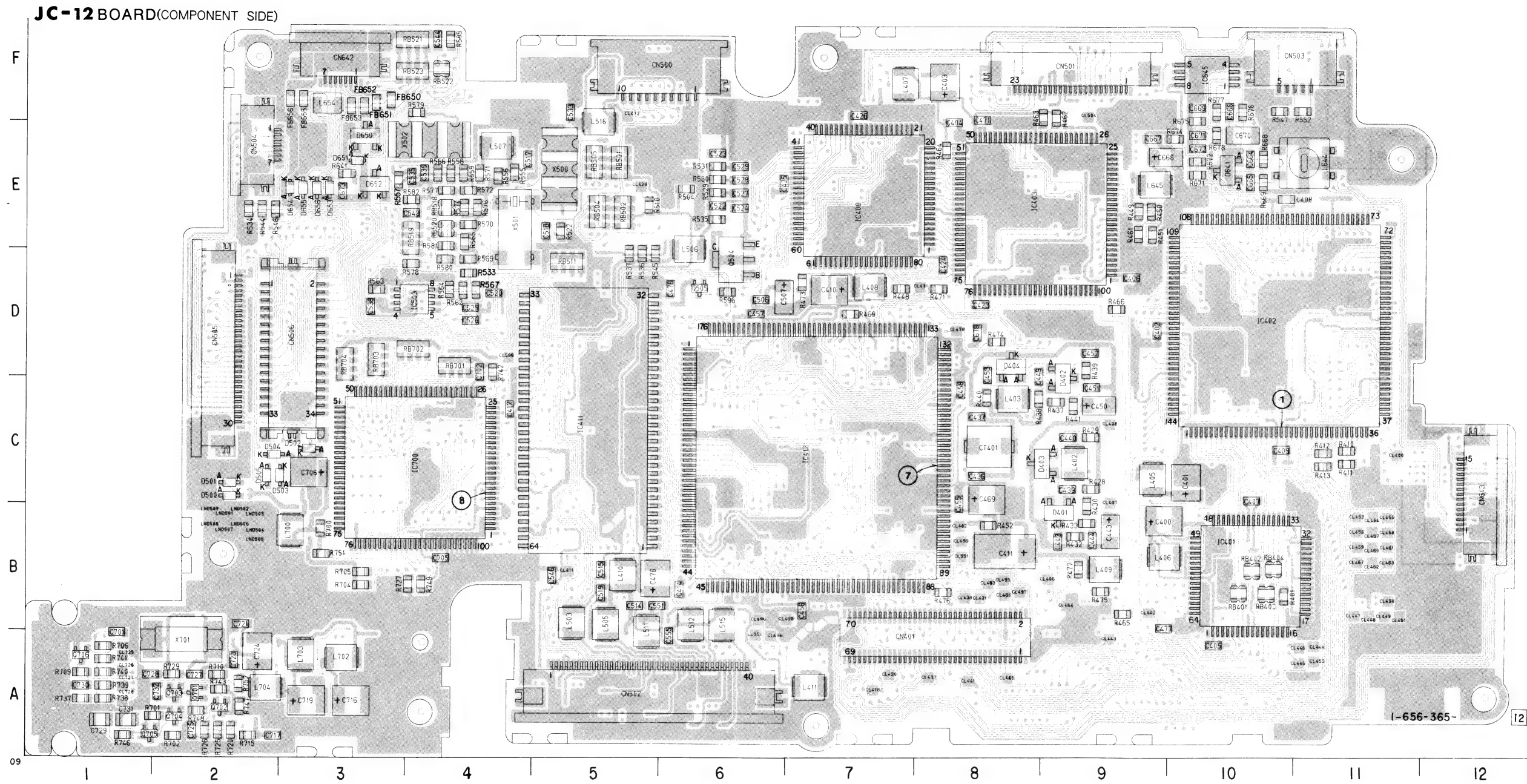
MG-16 BOARD
no mark : CAMERA REC/PB mode
R : CAMERA REC mode
P : PB mode

TO CB-49 BOARD CN201 (SEE PAGE 4-30)

DCR-VX1000/VX1000E

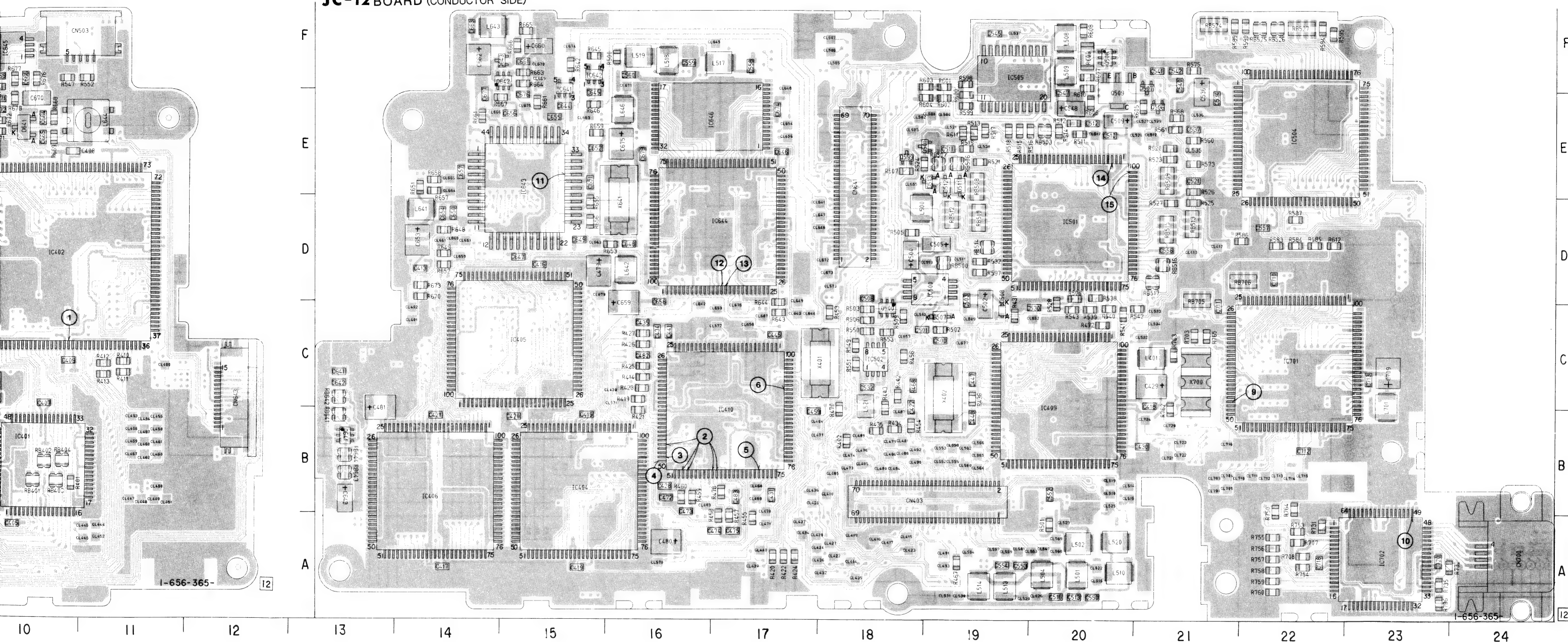
JC-12 (VIDEO CORE, DV IN/OUT, AUDIO, MODE CONTROL, HI CONTROL) PRINTED WIRING BOARD
— Ref. No. JC-12 BOARD: 3000 series —

There are few cases that the part isn't mounted in this model is printed on this diagram.

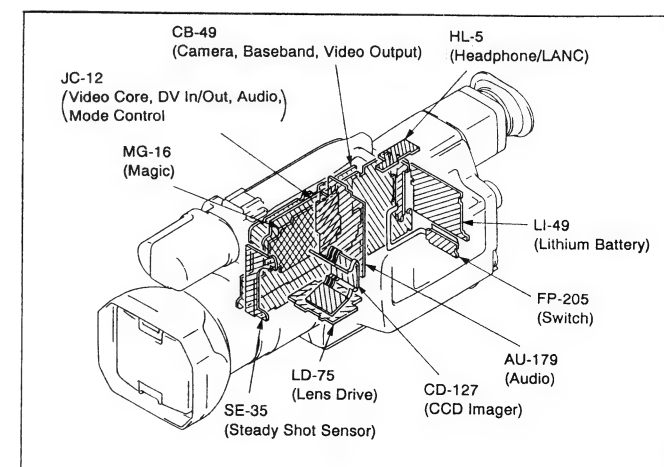
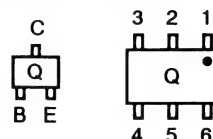


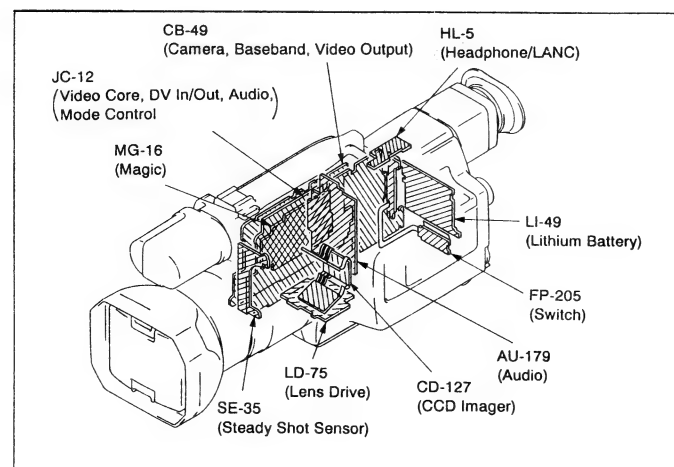
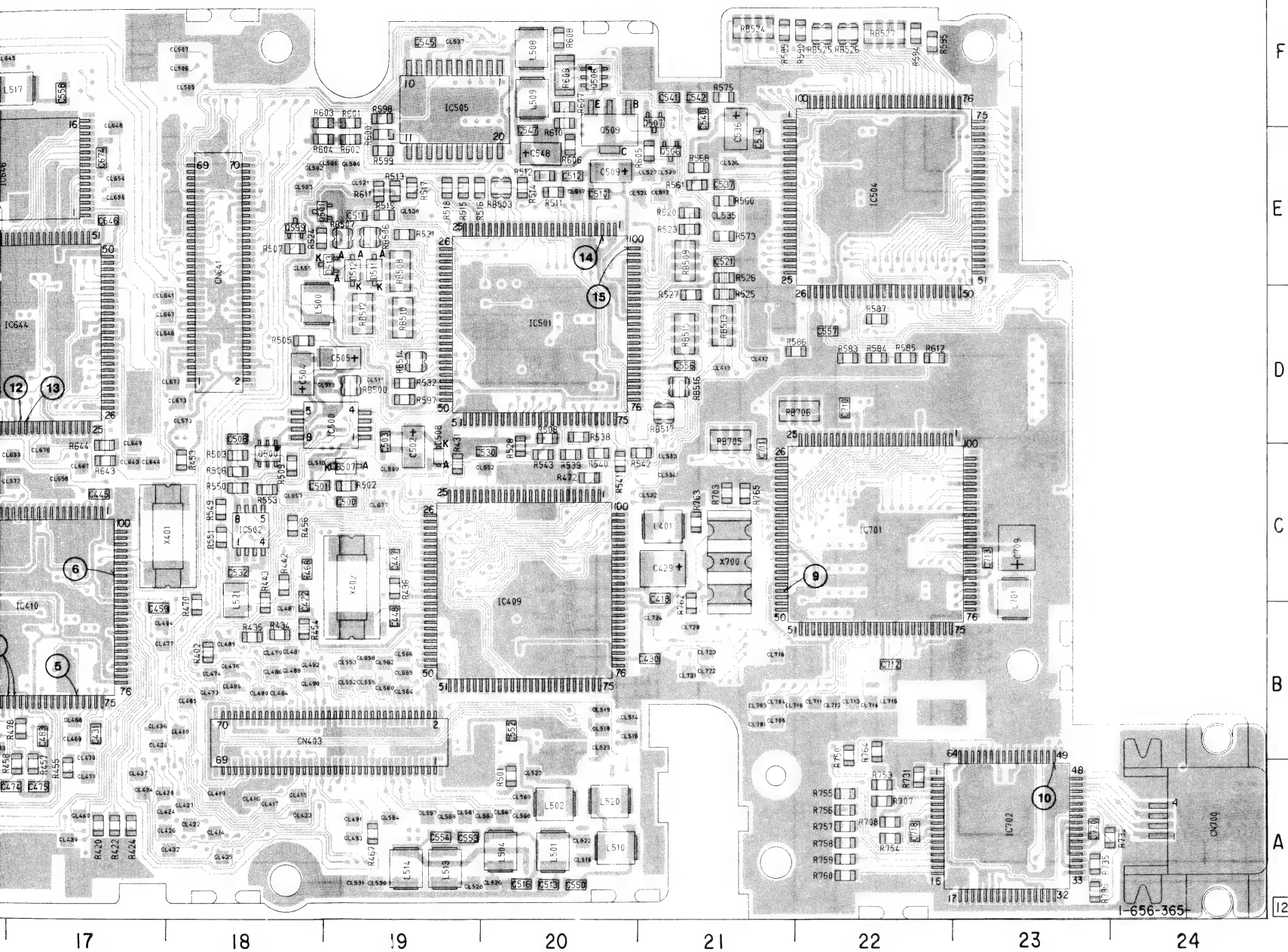
- For pri
- This bo
- of laye
- Chip tr

JC-12 BOARD (CONDUCTOR SIDE)



- **For printed wiring boards.**
- This board is a six-layer print board. However, the patterns of layers 2 to 5 have not been included in the diagram.
- Chip transistor



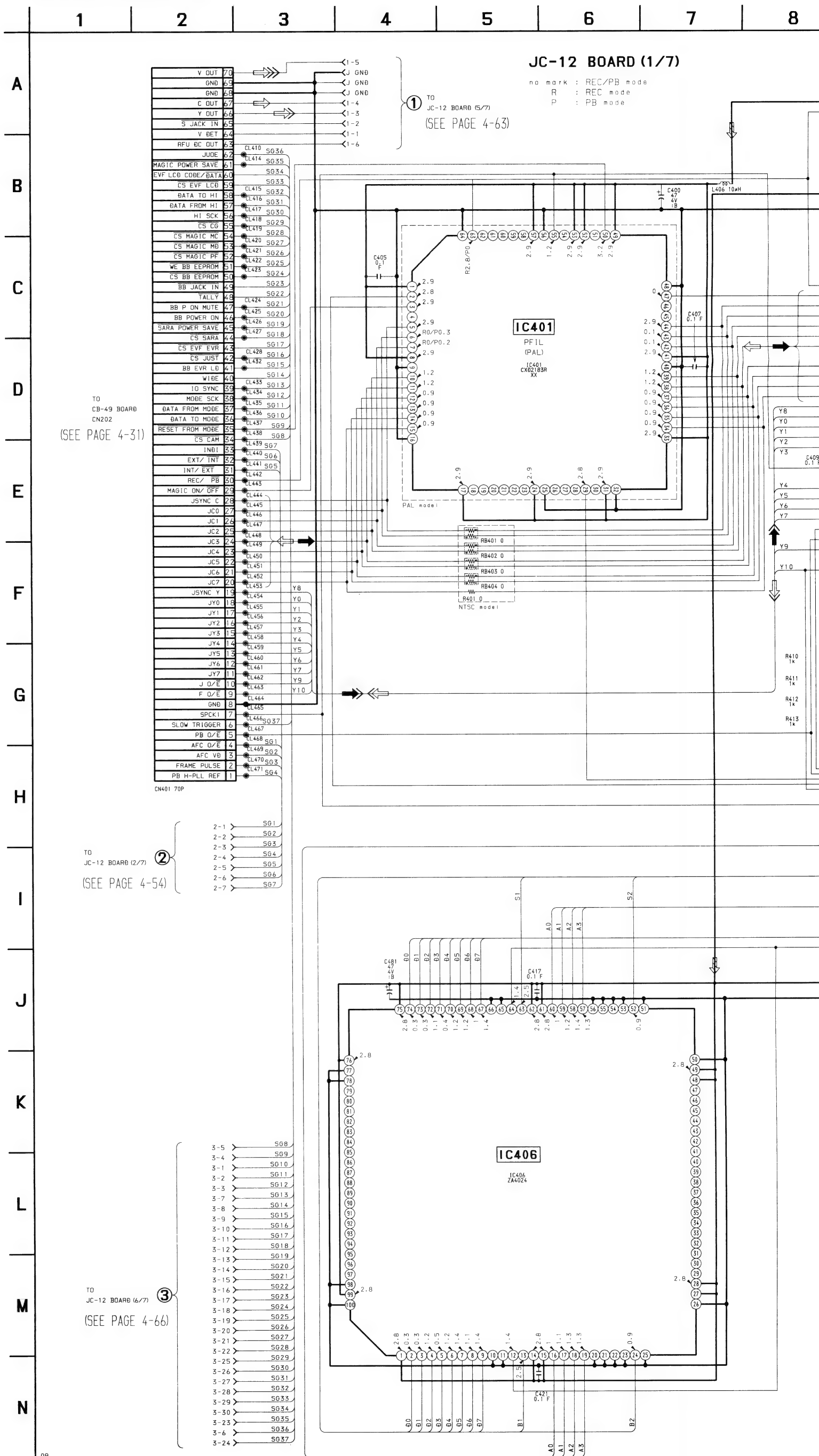


JC-12 BOARD

C400	B-9	C661	F-15	L402	C-9	R474	D-8	R671	E-10
C401	C-10	C662	F-14	L403	C-8	R475	B-9	R672	E-10
C402	D-9	C663	F-14	L404	C-9	R476	B-9	R673	D-14
C403	F-8	C664	E-10	L405	B-9	R477	B-9	R674	E-10
C404	E-8	C665	E-10	L406	D-7	R478	B-17	R675	F-10
C405	A-10	C667	E-9	L408	B-9	R500	F-16	R676	F-10
C406	D-9	C668	F-10	L409	B-9	R501	A-20	R677	F-10
C407	C-10	C669	F-10	L410	B-5	R503	C-18	R678	E-15
C408	E-10	C670	E-10	L411	A-7	R504	E-6	R681	E-10
C409	C-10	C671	E-10	L500	D-18	R505	D-18	R700	B-3
C410	D-7	C672	E-10	L501	A-20	R506	C-18	R702	A-2
C411	B-8	C673	E-3	L502	A-20	R507	E-18	R703	C-21
C412	C-4	C674	E-17	L503	B-5	R508	D-20	R704	B-3
C413	D-14	C675	E-16	L504	A-20	R510	E-5	R705	B-3
C414	B-6	C676	E-15	L505	B-5	R511	E-20	R706	A-1
C415	B-15	C677	E-14	L506	D-6	R512	E-20	R707	A-22
C416	D-15	C678	D-8	L507	E-4	R514	E-20	R708	A-22
C417	A-14	C679	E-16	L508	F-20	R515	E-19	R709	A-1
C418	C-21	C702	D-4	L509	F-20	R516	E-20	R710	A-2
C419	A-15	C705	B-4	L510	A-20	R517	E-19	R715	A-2
C420	B-15	C706	C-3	L511	A-5	R518	E-19	R720	A-2
C421	B-14	C709	C-23	L512	B-6	R519	E-19	R725	A-2
C422	B-18	C710	D-22	L513	A-19	R520	E-21	R726	A-2
C423	D-8	C711	C-21	L514	A-19	R521	E-19	R727	B-4
C424	D-8	C712	B-22	L515	B-6	R522	E-5	R732	A-24
C425	F-6	C713	C-23	L516	E-5	R523	E-21	R735	A-23
C426	F-7	C716	A-3	L517	F-17	R524	E-19	R736	A-23
C428	B-16	C717	A-2	L518	F-16	R525	D-21	R737	A-1
C429	C-21	C718	A-22	L519	F-16	R526	E-21	R738	A-1
C430	B-21	C719	A-3	L520	A-20	R527	D-21	R739	A-1
C431	B-17	C720	A-23	L521	C-18	R529	E-6	R740	A-1
C436	C-8	C721	B-2	L641	D-14	R530	E-6	R741	A-1
C437	C-8	C723	A-2	L642	D-16	R531	E-6	R742	D-4
C439	C-9	C724	A-2	L643	F-14	R532	D-19	R747	A-2
C440	C-9	C725	A-2	L644	E-11	R536	D-5	R748	A-2
C441	C-16	C727	A-2	L645	E-9	R537	D-5	R749	B-4
C442	B-9	C728	A-1	L646	E-16	R538	D-20	R750	B-22
C443	B-9	C729	A-1	L654	F-3	R539	C-20	R751	B-3
C444	B-9	C730	A-1	L700	B-3	R540	C-20	R752	A-2
C445	C-17	C731	A-1	L701	C-23	R541	C-20	R753	A-22
C447	C-19			L702	A-3	R542	C-21	R754	A-22
C448	B-19	CN401	A-8	L703	A-3	R543	C-20	R755	A-22
C449	D-8	CN403	B-19	L704	A-2	R544	E-2	R756	A-22
C450	C-9	CN500	F-5			R545	D-5	R757	A-22
C451	C-9	CN501	F-9	Q500	C-18	R547	F-10	R758	A-22
C452	D-9	CN502	A-5	Q501	E-19	R550	C-18	R759	A-22
C453	D-8	CN503	F-10	Q504	D-6	R551	C-18	R760	A-22
C455	B-8	CN504	E-2	Q505	D-6	R552	F-11	R762	B-21
C456	B-7	CN505	D-2	Q506	E-21	R555	E-4	R763	C-21
C457	D-6	CN506	D-3	Q507	F-21	R559	E-4	R764	B-22
C458	C-8	CN641	E-18	Q508	F-20	R560	E-21		
C469	C-8	CN642	F-3	Q509	E-20	R563	D-3	RB401	B-10
C471	F-8	CN643	C-12	Q641	B-13	R564	D-4	RB402	B-10
C476	B-5	CN644	C-12	Q642	F-15	R565	E-4	RB403	B-10
C478	D-6	CN700	A-24	Q643	F-15	R568	E-21	RB404	B-10
C479	D-15	D401	B-9	Q702	A-2	R569	D-4	RB500	D-19
C480	A-16	D402	C-9	Q703	A-2	R570	E-4	RB501	E-5
C481	B-13	D403	C-8	Q704	A-2	R571	E-4	RB502	E-5
C482	C-16	D404	D-8	Q705	A-1	R572	E-4	RB503	E-20
C483	B-17	D500	C-2	Q706	A-1	R573	E-21	RB504	E-5
C500	C-19	D501	C-2			R574	E-4	RB505	E-5
C501	C-18	D502	C-3	R401	B-10	R575	F-21	RB506	E-19
C502	C-19	D503	C-2	R402	B-18	R576	E-4	RB507	E-19
C504	D-18	D504	C-2	R410	C-11	R577	E-4	RB508	E-19
C505	D-19	D505	C-2	R411	C-11	R578	D-4	RB509	E-21
C509	E-20	D507	C-19	R412	C-11	R579	F-4	RB510	D-19
C510	E-20	D508	C-19	R413	C-11	R580	D-4	RB511	D-5
C511	E-19	D511	E-19	R414	C-16	R581	E-4	RB512	D-19
C512	E-20	D512	E-19	R419	C-16	R583	D-22	RB513	D-21
C517	E-4	D513	E-19	R420	A-17	R584	D-22	RB514	D-19
C518	E-5	D641	E-10	R421	B-16	R585	D-22	RB515	D-21
C520	D-4	D650	E-3	R422	A-17	R586	D-22	RB516	D-21
C521	E-21	D652	E-3	R423	C-16	R587	D-22	RB517	D-21
C522	E-6	D653	E-3	R424	A-17	R588	F-4	RB518	E-4
C523	E-6	D654	E-3	R426	C-16	R589	F-21	RB519	E-4
C524	E-6	D655	E-3	R427	C-16	R590	F-22	RB520	E-4
C525	D-4			R428	C-9	R594	F-22	RB521	F-4
C526	D-4	FB650	F-3	R429	C-9	R595	F-22	RB522	F-4
C527	E-6	FB651	F-3	R430	B-9	R596	D-6	RB523	F-4
C528	E-6	FB652	F-3	R431	C-19	R597	D-19	RB524	F-21
C529	E-6	FB653	F-3	R432	B-9	R600	E-19	RB525	F-22
C530	C-20	FB655	F-3	R433	B-9	R601	F-19	RB526	F-22
C532	C-18	FB656	F-3	R434	B-18	R602	E-19	RB527	F-22
C534	E-21			R435	B-18	R603	F-19	RB641	B-13
C536	E-21	IC401	B-10	R436	C-19	R604	E-19	RB642	C-13
C537	E-21	IC402	D-10	R437	C-9	R605	E-21	RB643	B-13
C538	D-3	IC403	E-8	R438	C-8	R606	E-20	RB644	B-13
C539	E-4	IC404	B-15	R439	D-9	R607	F-20	RB701	D-4
C545	F-19	IC405	C-15	R440	C-8	R608	F-20	RB702	D-4
C547	E-20	IC406	B-14	R441	C-9	R609	F-20	RB703	D-3
C556	D-21	IC408	E-7	R442	C-18	R610	F-20	RB704	D-3
C557	D-22	IC409	C-20	R443	B-18	R641	E-3	RB705	D-21
C641	C-13	IC410	B-17	R444	D-7	R642	F-15	RB706	D-22
C642	C-13	IC411	C-5	R449	E-9	R643	C-17		
C643	B-13	IC412	C-7	R451	E-9	R645	F-15	X401	C-18
C644	E-15	IC500	D-19	R453	C-18	R648	D-14	X402	C-19
C645	E-15	IC501	D-20	R454	B-18	R649	D-14	X500	E-5
C646	E-17	IC502	C-18	R455	A-17	R651	E-14	X501	E-4
C647	D-15	IC503	D-4	R456	C-18	R652	D-14	X502	E-4
C648	D-16	IC504	E-22	R457	A-17	R653	D-16	X641	D-16
C649	D-15	IC505	F-19	R458	A-17	R655	D-15	X700	C-21
C650	D-14	IC641	E-15	R459	B-16	R656	D-15	X701	A-2
C651	E-15	IC642	F-15	R460	B-16	R657	E-14		
C652	E-15	IC643	E-15	R462	F-9	R658	E-14		
C653	D-14	IC644	D-17	R466	D-9	R659	E-15		
C654	D-14	IC645	F-10	R467	A-19	R661	E-14		
C655	E-15	IC646	E-17	R468	C-18	R663	F-15		
C656	E-15	IC700	C-4	R469	D-7	R664	F-15		
C657	E-14	IC701	C-22	R470	B-18	R665	F-15		
C658	C-16	IC702	A-23	R471	D-8	R666	F-15		
C659	C-16			R472	C-20	R668	E-10		
C660	F-15	L401	C-21	R473	D-7	R669	E-10		

JC-12 (VIDEO CORE 1) SCHEMATIC DIAGRAM

— Ref. No. JC-12 BOARD: 3000 series —

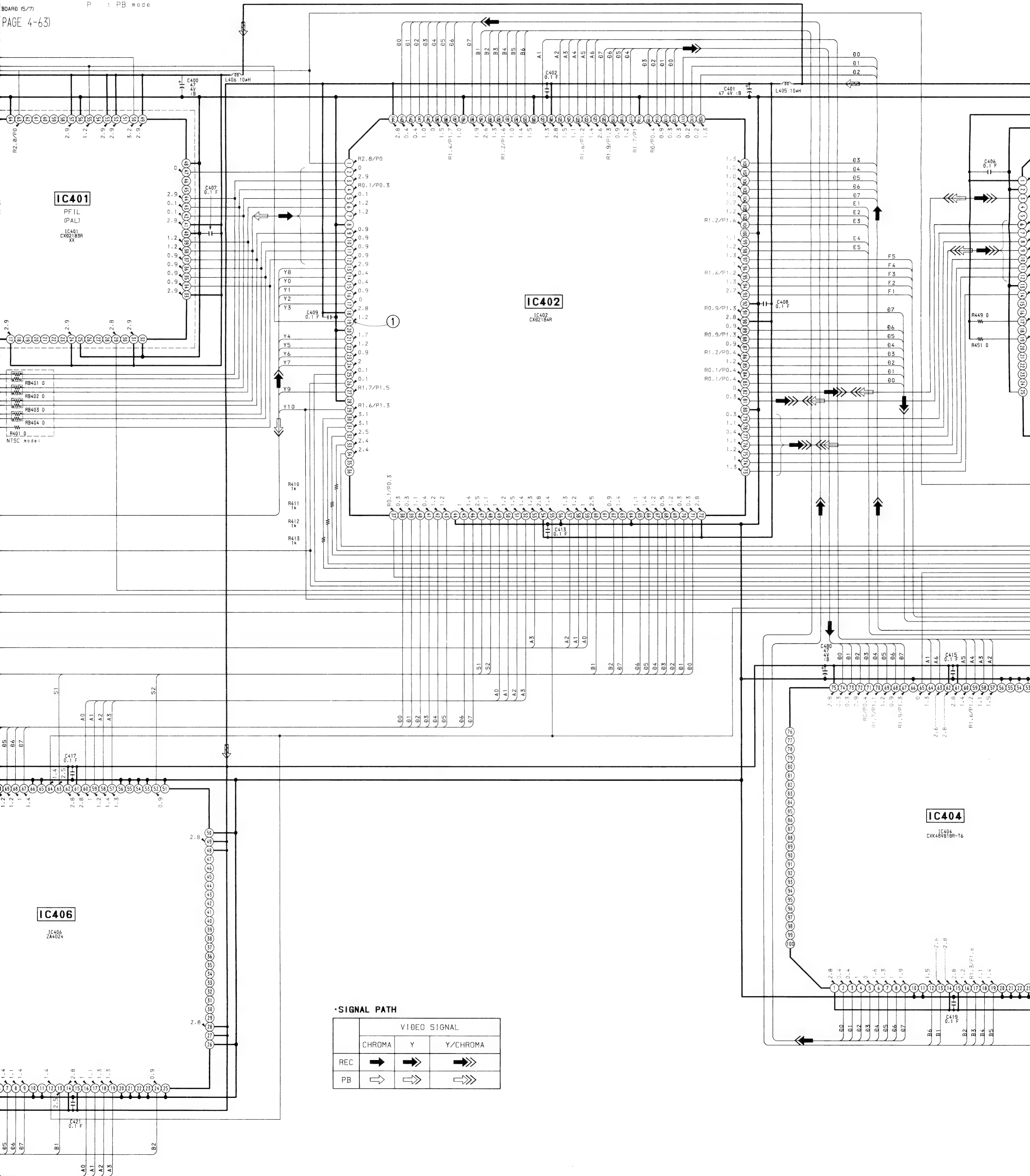


JC-12 BOARD (1/7)

no mark : REC/PB mode
R : REC mode
P : PB mode

BOARD (5/7)

PAGE 4-63)



14

15

16

17

18

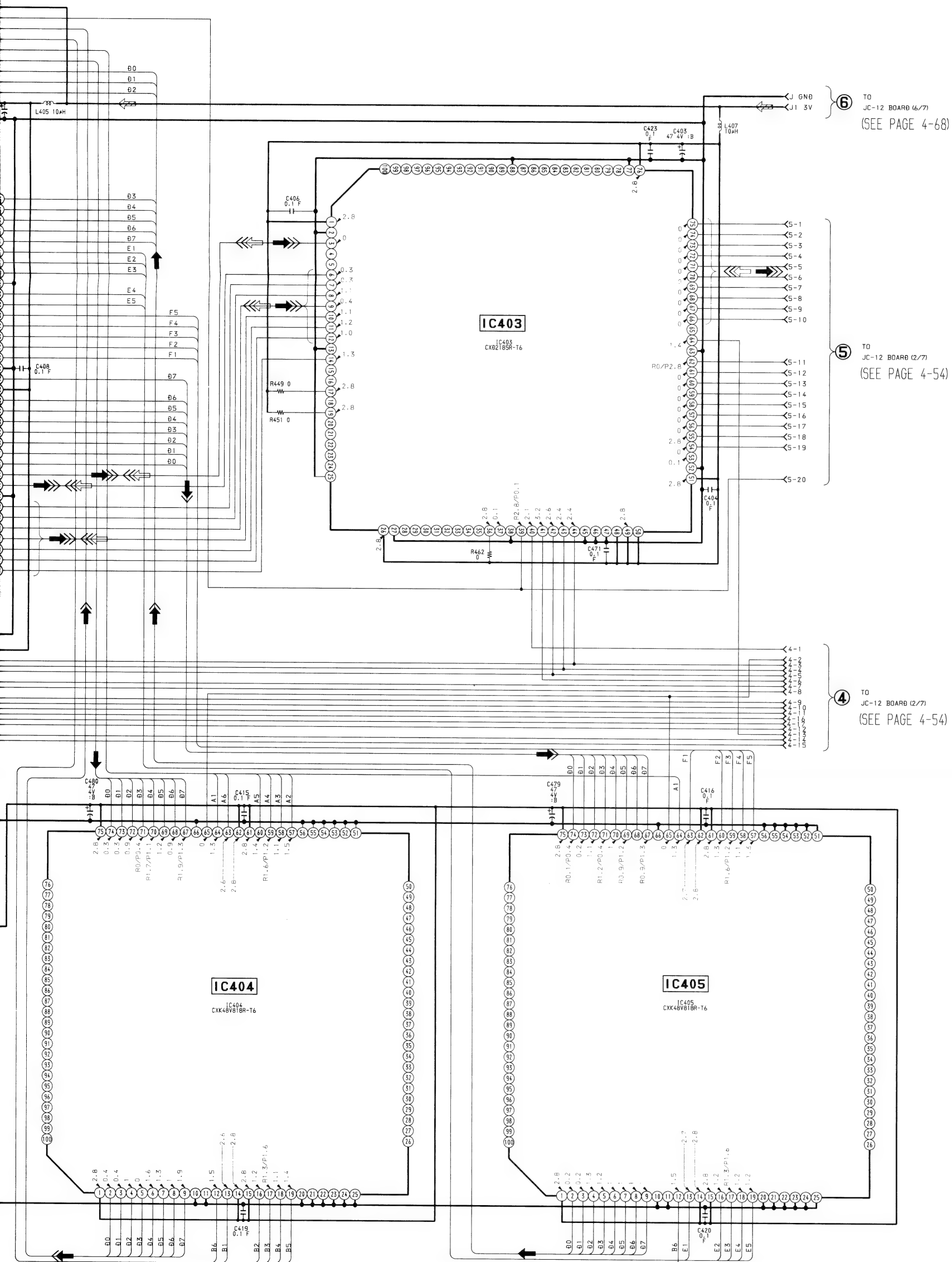
19

20

21

22

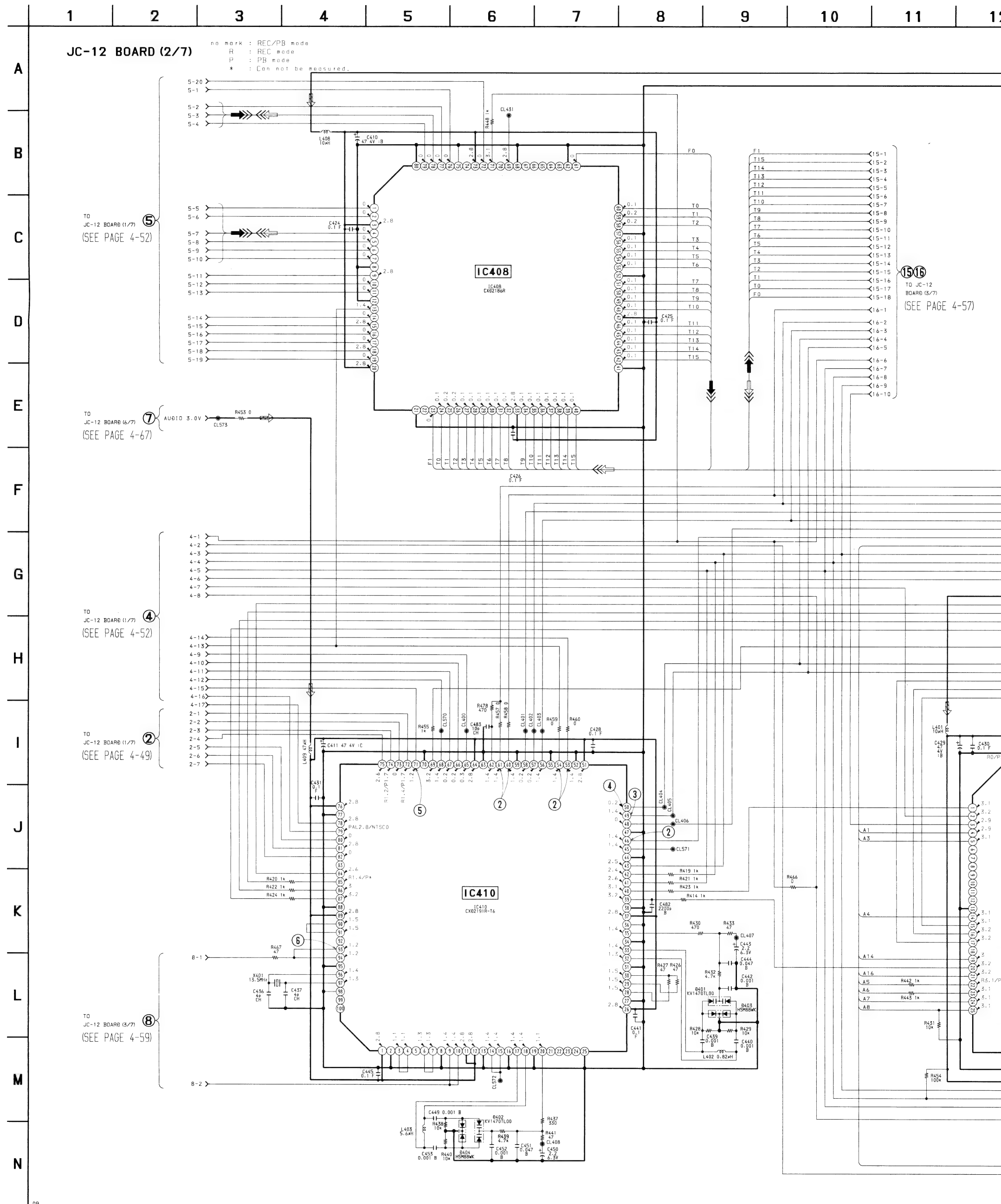
DCR-VX1000:NTSC mode
DCR-VX1000E:PAL mode

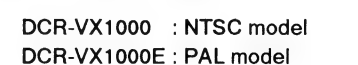




JC-12 (VIDEO CORE 2) SCHEMATIC DIAGRAM

— Ref. No. JC-12 BOARD: 3000 series —

- Refer to page 4–44 for Printed Wiring Board.





- SIGNAL PATH			
	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC			
PB			

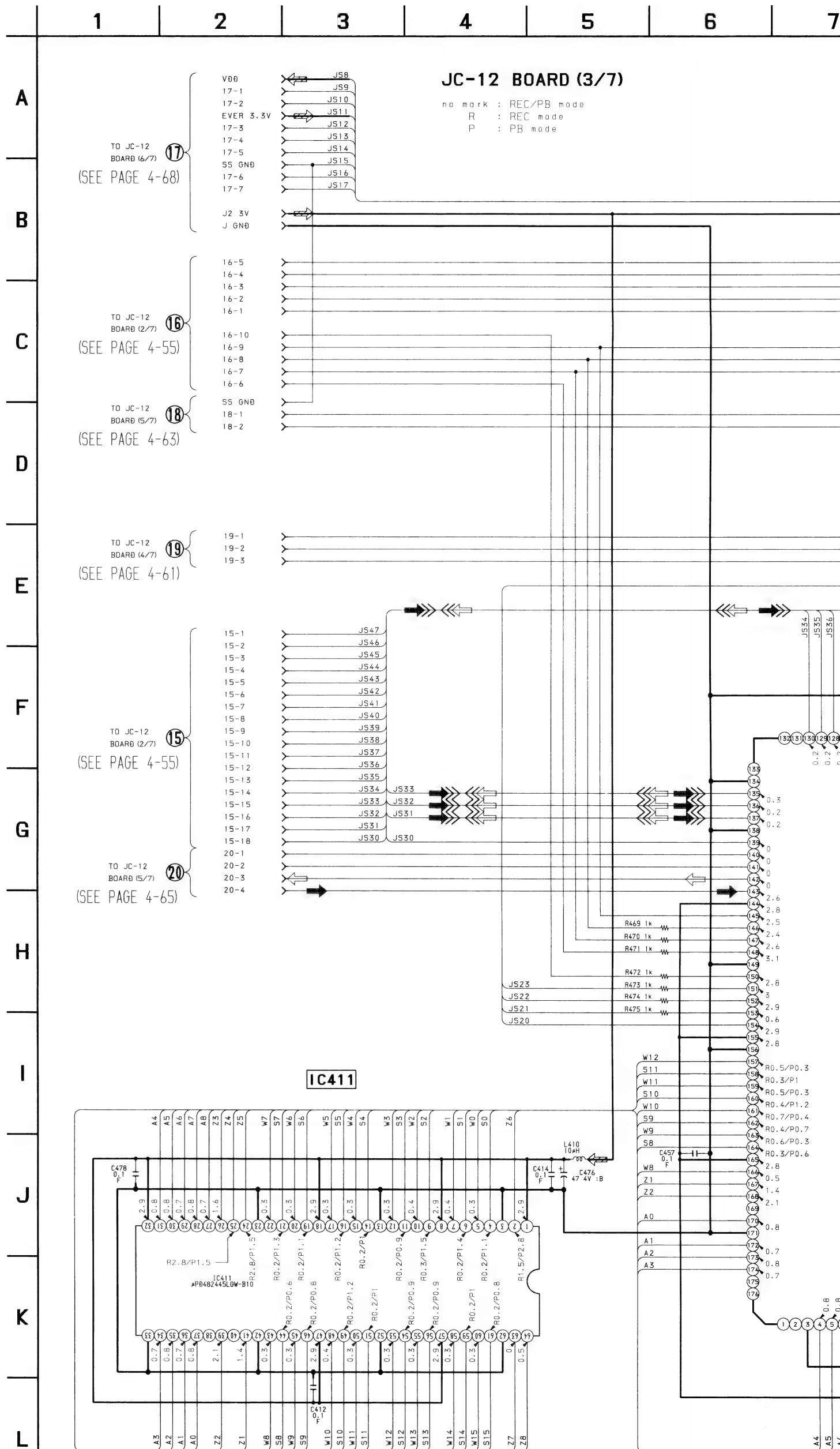
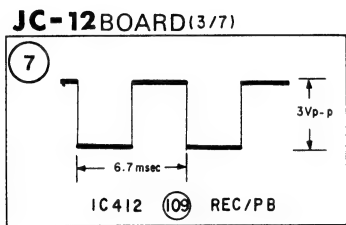
NOTE: The IC409 has three types as shown in the following table, but only "TYPE (CXP911016-007R)" is supplied as a repair parts. When replacing the IC409 on a set which is mounted with the parts of TYPE 1 and TYPE 2, be sure to replace simultaneously the IC880 (TYPE 3: CXP911016-006R) on the RS-board as well. (There is no interchangeability between types.)

Board	Drawing No.	TYPE 1	TYPE 2	TYPE 3
RS-63	IC880	CXP911016-001R	CXP911016-005R	CXP911016-006R
JC-12	IC409	CXP911016-002R	CXP911016-004R	CXP911016-007R

JC-12 (VIDEO CORE 3) SCHEMATIC DIAGRAM

— Ref. No. JC-12 BOARD: 3000 series —

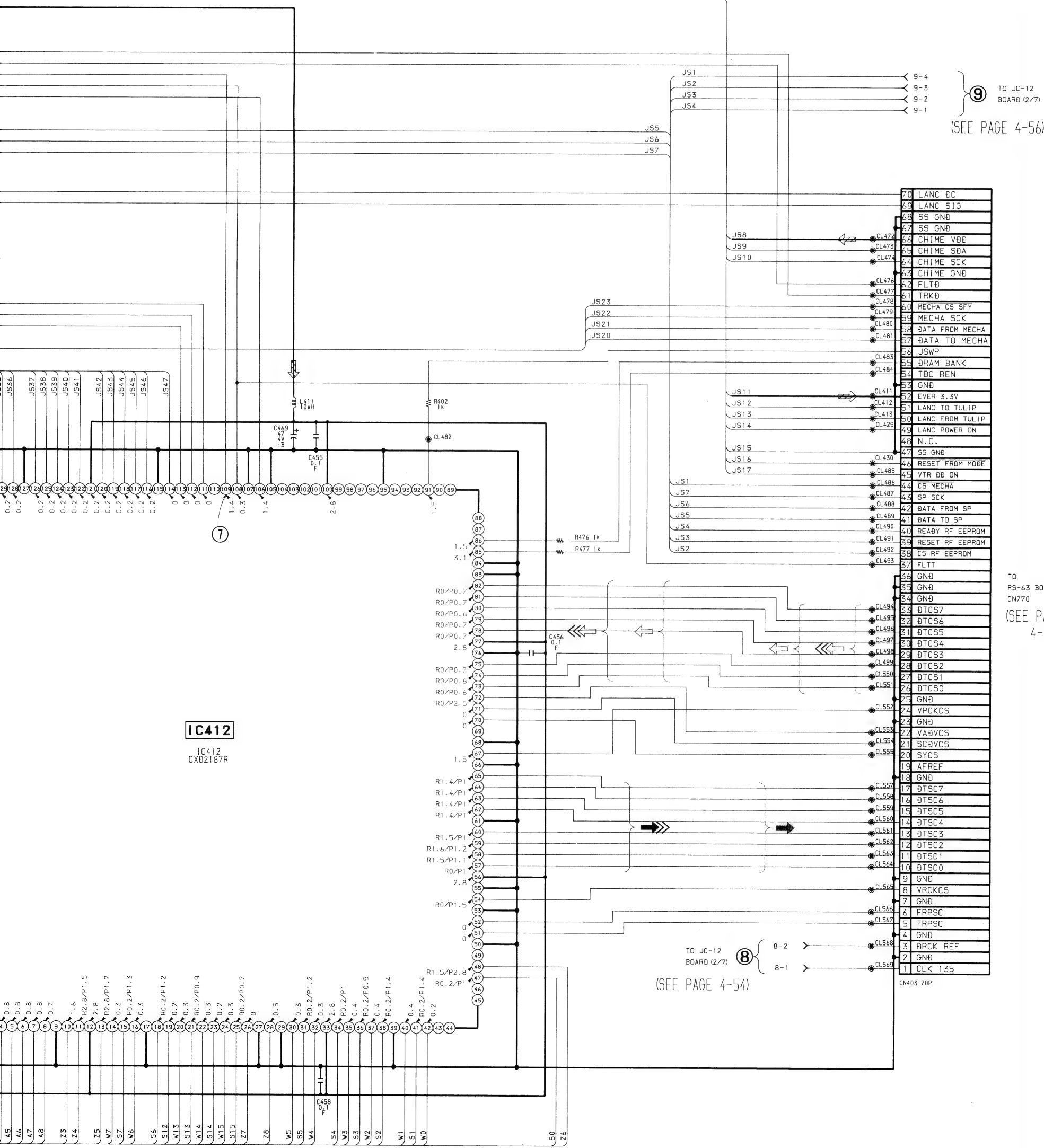
• Refer to page 4-44 for Printed Wiring Board.



7	8	9	10	11	12	13	14	15	16
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•SIGNAL PATH

	VIDEO SIGNAL			AUDIO
	CHROMA	Y	Y/CHROMA	SIGNAL
REC			➡➡➡	➡
PB			➡➡➡	➡

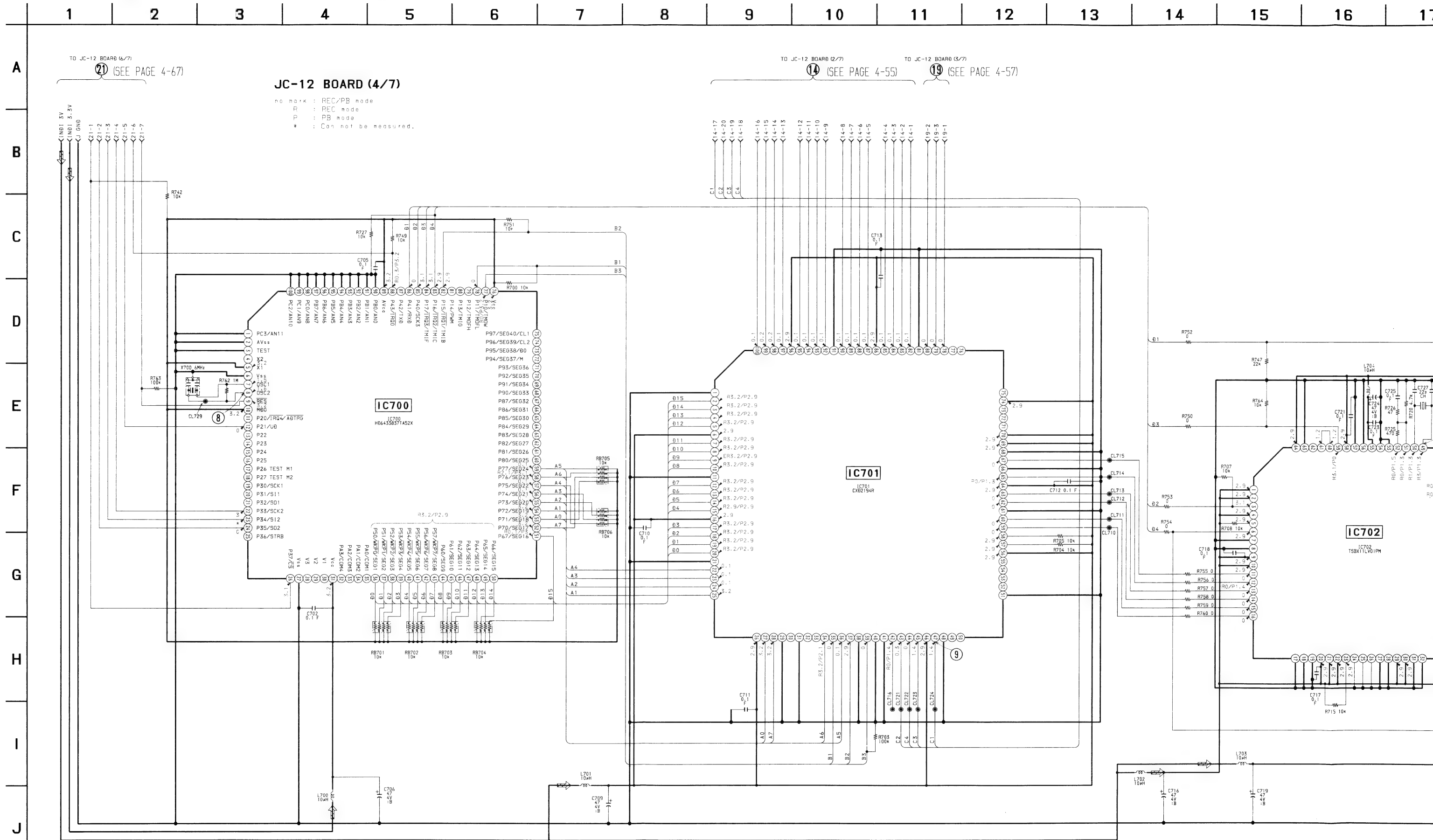


DCR-VX1000/VX1000E

JC-12 (DC IN/OUT) SCHEMATIC DIAGRAM

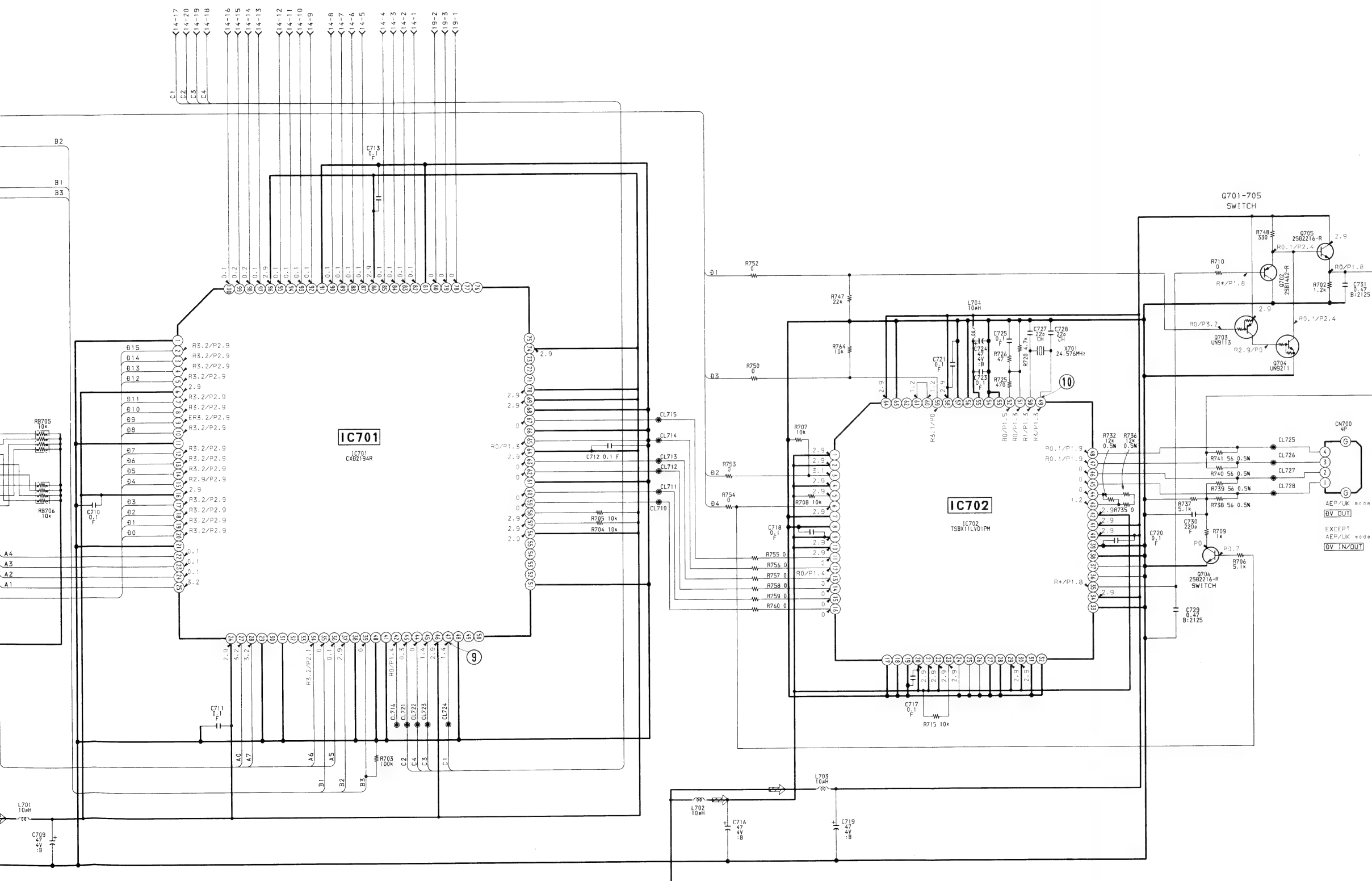
- Refer to page 4-44 for Printed Wiring Board.

— Ref. No. JC-12 BOARD: 3000 series —

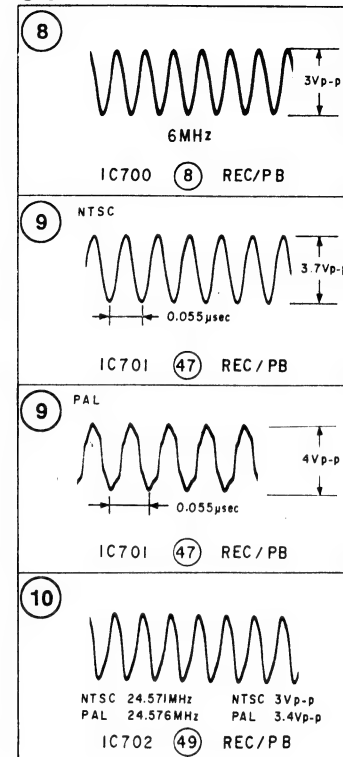


DCR-VX1000:NTSC model
DCR-VX1000E:PAL model

TO JC-12 BOARD (2/7) 14 (SEE PAGE 4-55)
TO JC-12 BOARD (3/7) 19 (SEE PAGE 4-57)



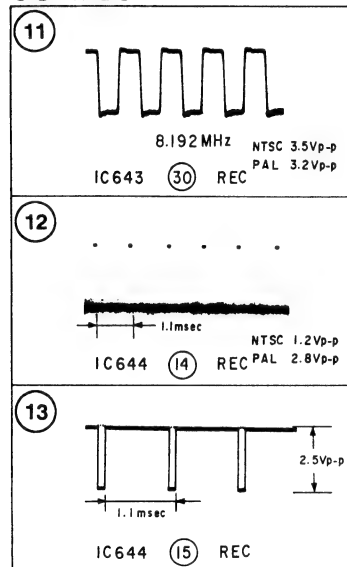
JC-12 BOARD (4/7)



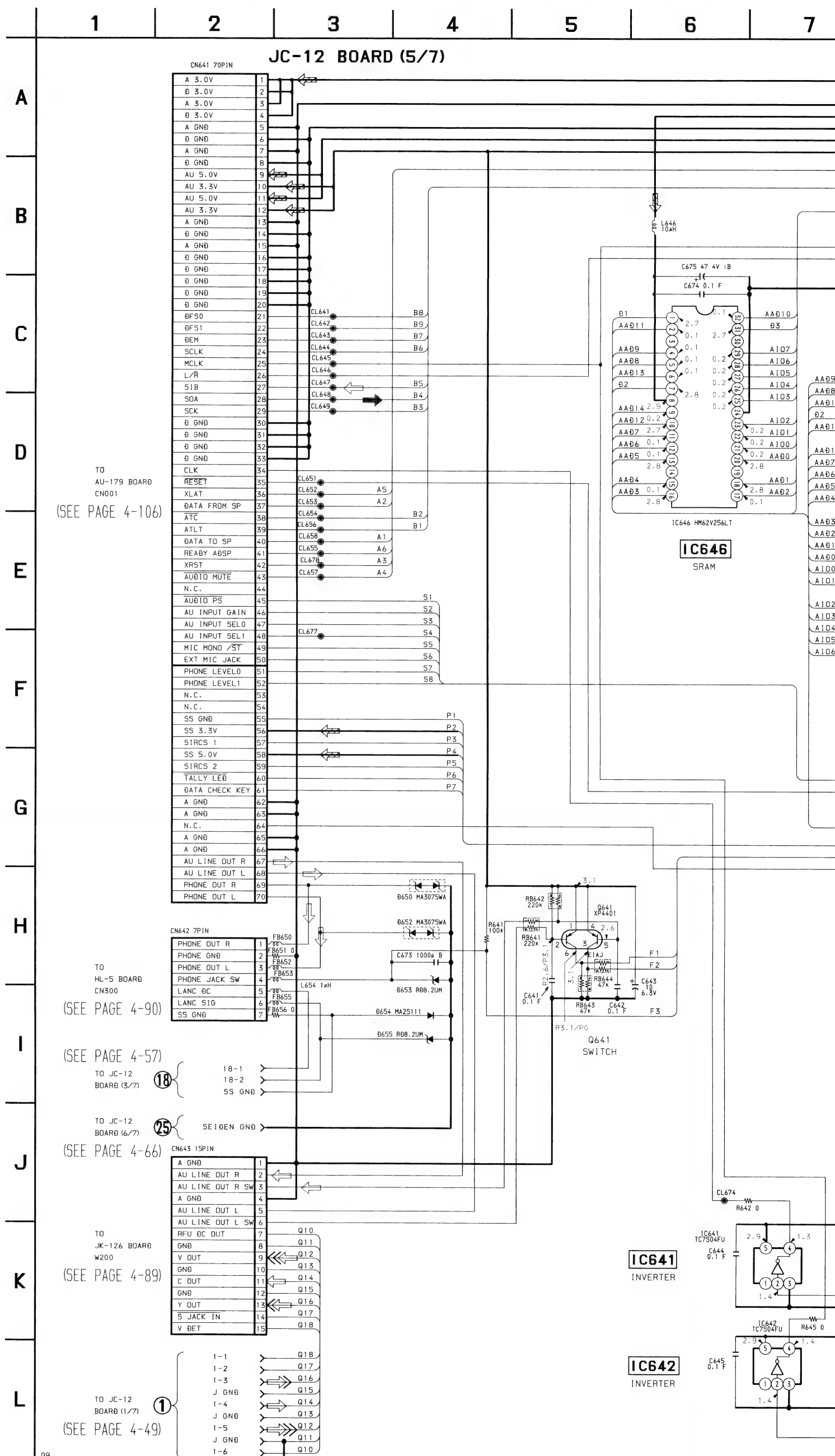
DCR-VX1000 : NTSC model
DCR-VX1000E : PAL model

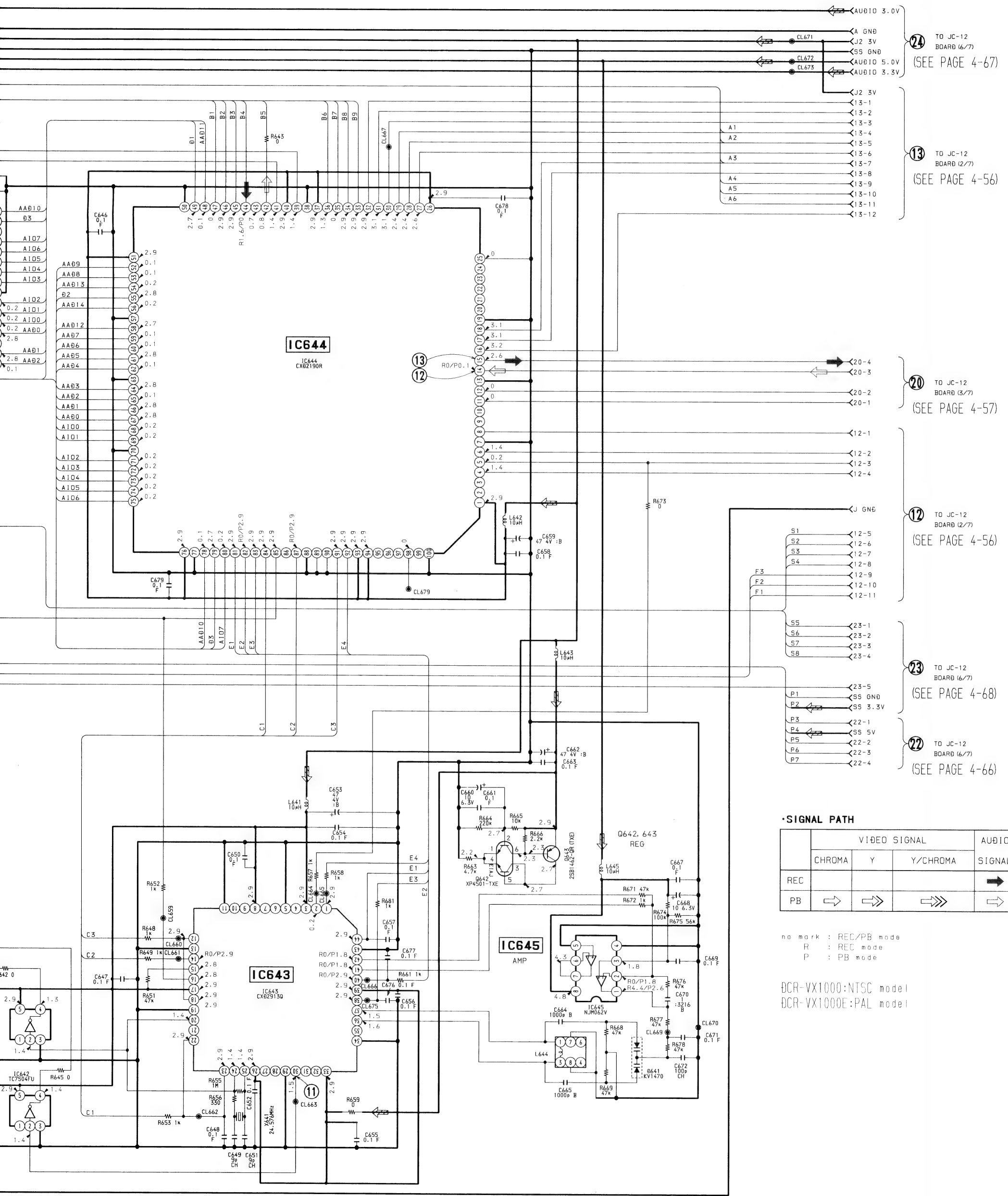
— Ref. No. JC-12 BOARD: 3000 series —

- Refer to page 4–44 for Printed Wiring Board.



DCR-VX1000 : NTSC model
DCR-VX1000E : PAL model





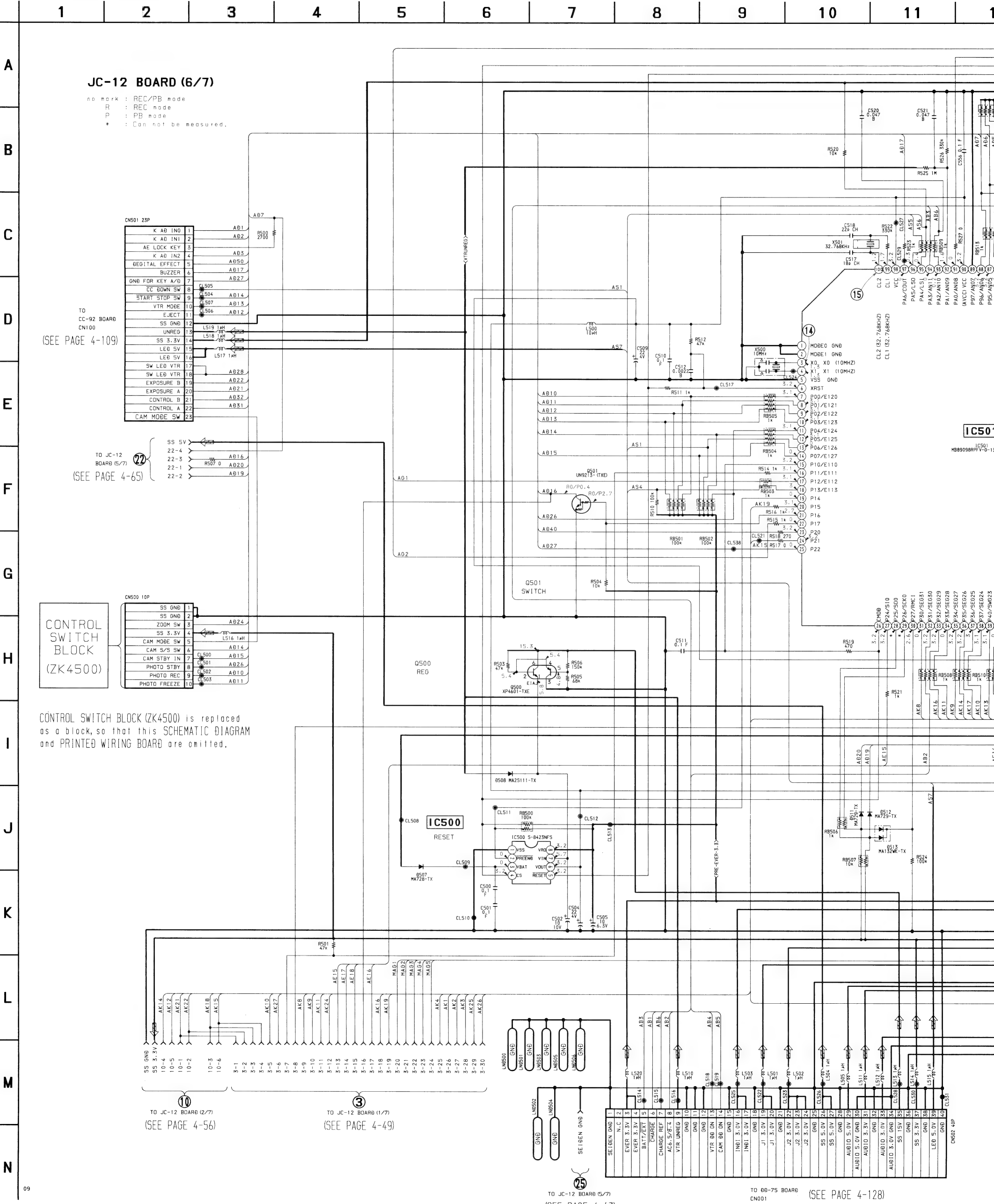
·SIGNAL PATH

	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA	
REC				→
PB	→	→	→	→

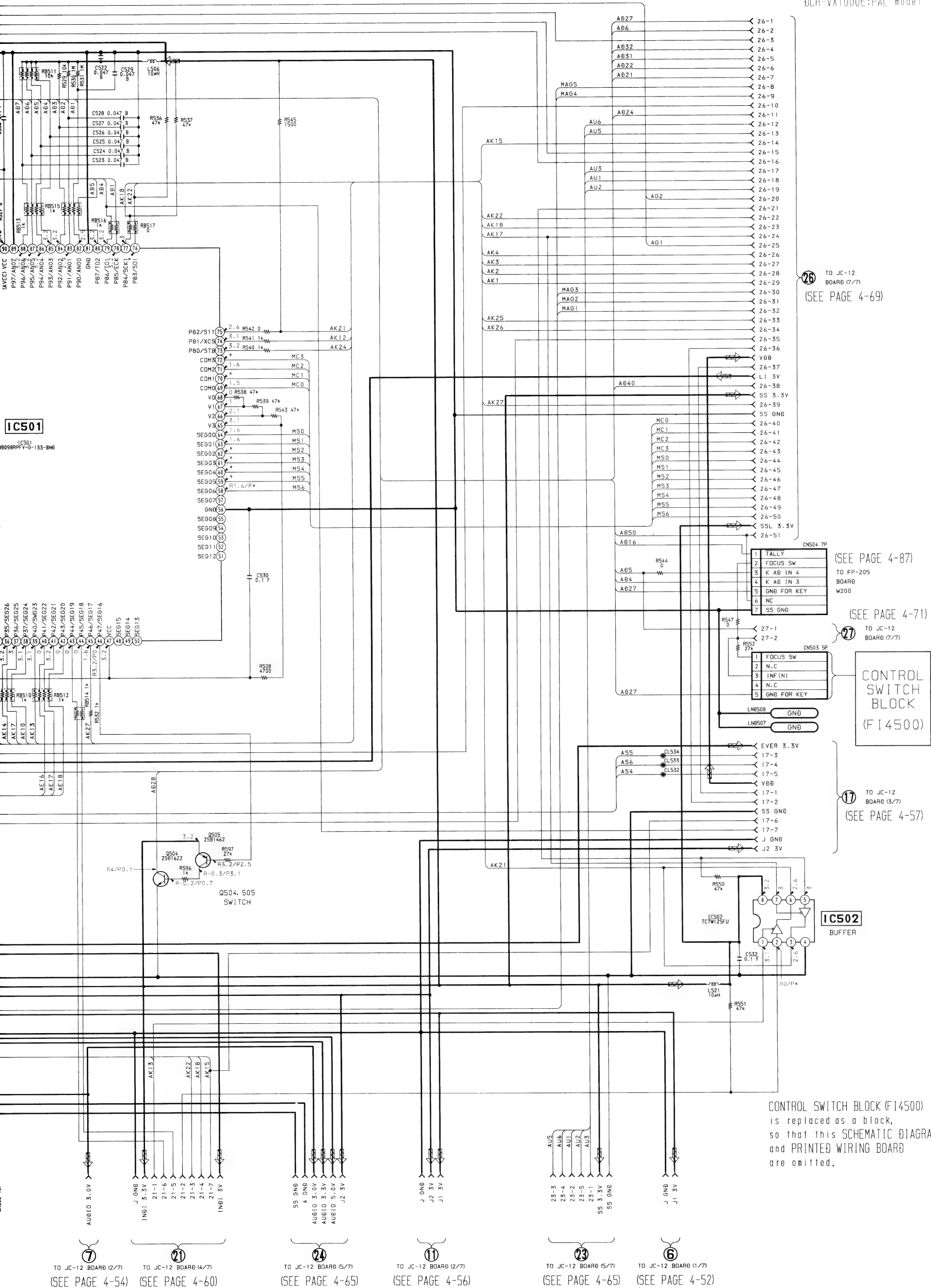
no mark : REC/PB mode
R : REC mode
P : PB mode

DCR-VX1000:NTSC model
DCR-VX1000E:PAL model

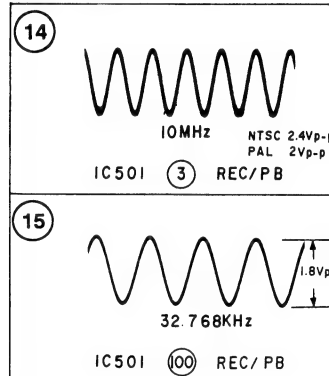
JC-12 (MODE CONTROL) SCHEMATIC DIAGRAM • Refer to page 4-44 for Printed Wiring Board.
— Ref. No. JC-12 BOARD: 3000 series —



DCR-VX1000:NTSC model
DCR-VX1000E:PAL model



JC-12 BOARD (6/7)



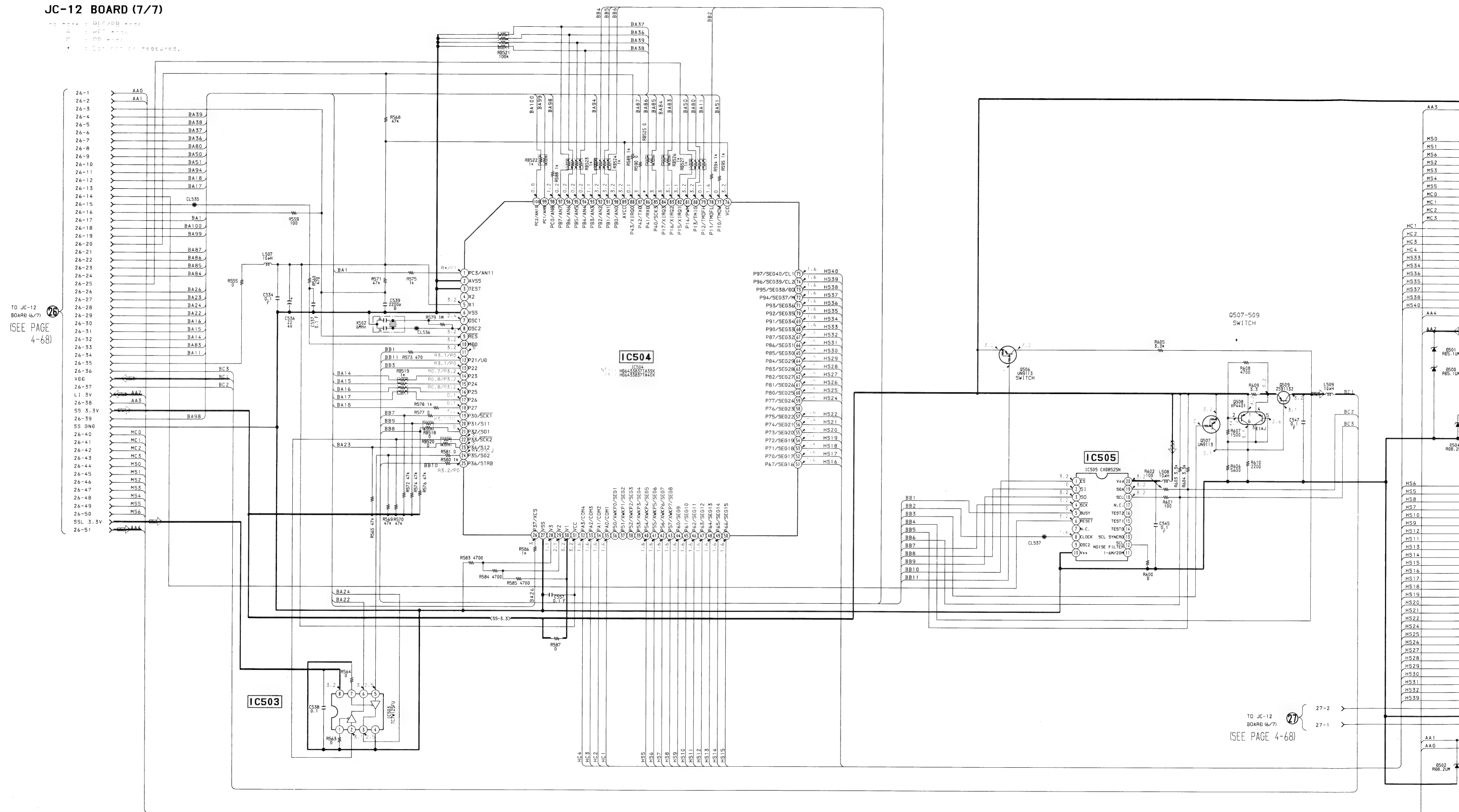
DCR-VX1000 : NTSC model
DCR-VX1000E : PAL model

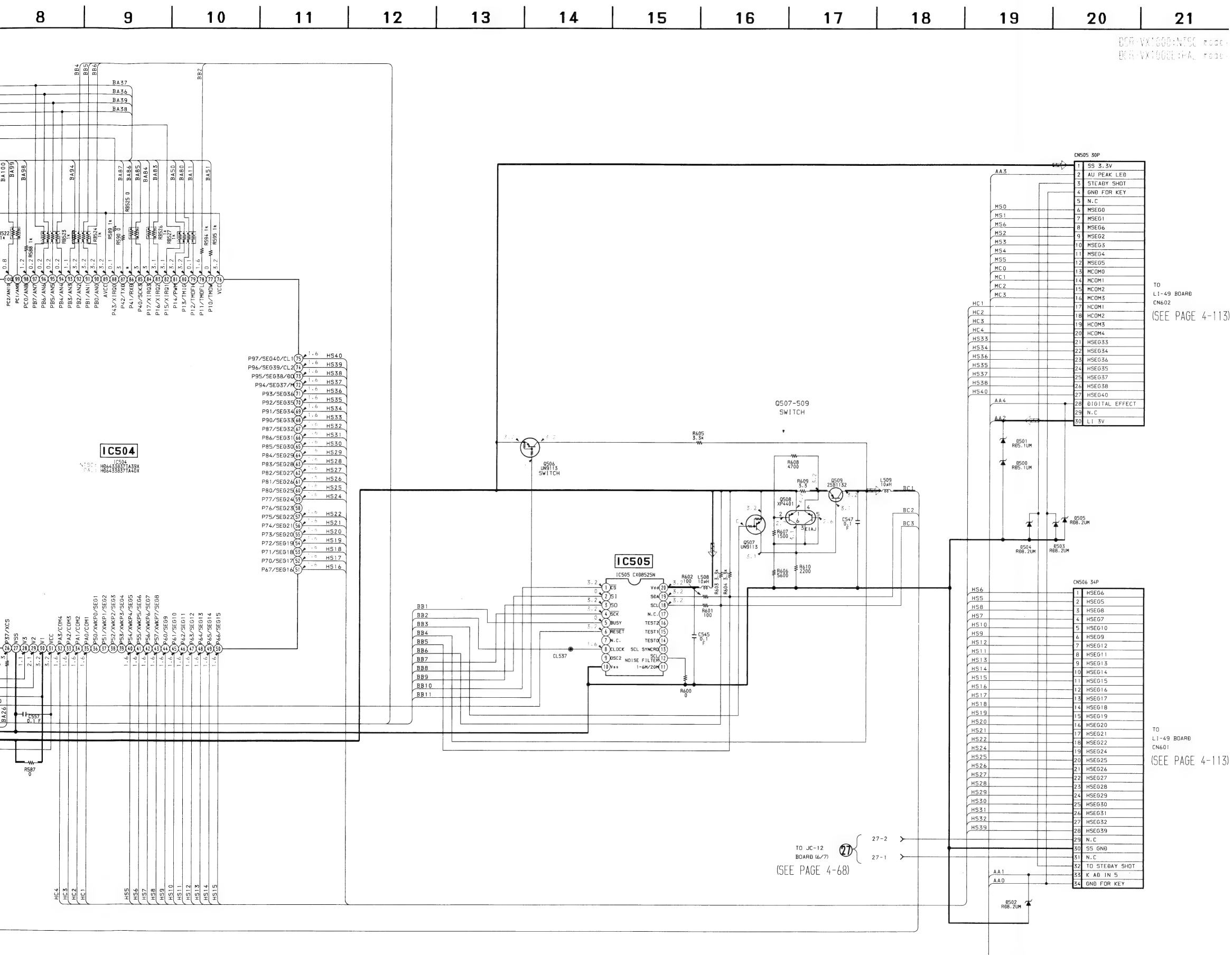
CONTROL SWITCH BLOCK (FI4500)
is replaced as a block,
so that this SCHEMATIC DIAGRAM
and PRINTED WIRING BOARD
are omitted.

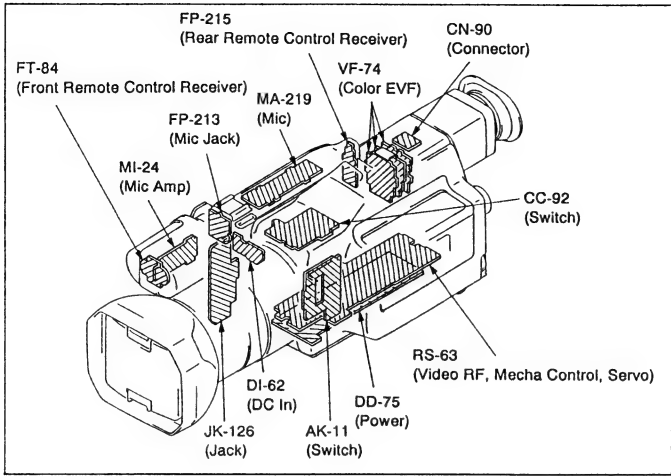
```

DO IOKK : DEF/DB ADDS
      : DEF ADDS
      : DB ADDS
      * : COUNTR : measured

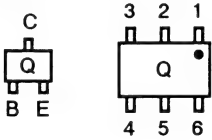
```







- For printed wiring boards.
- This board is a six-layer print board. However, the patterns of layers 2 to 5 have not been included in the diagram.
- Chip transistor

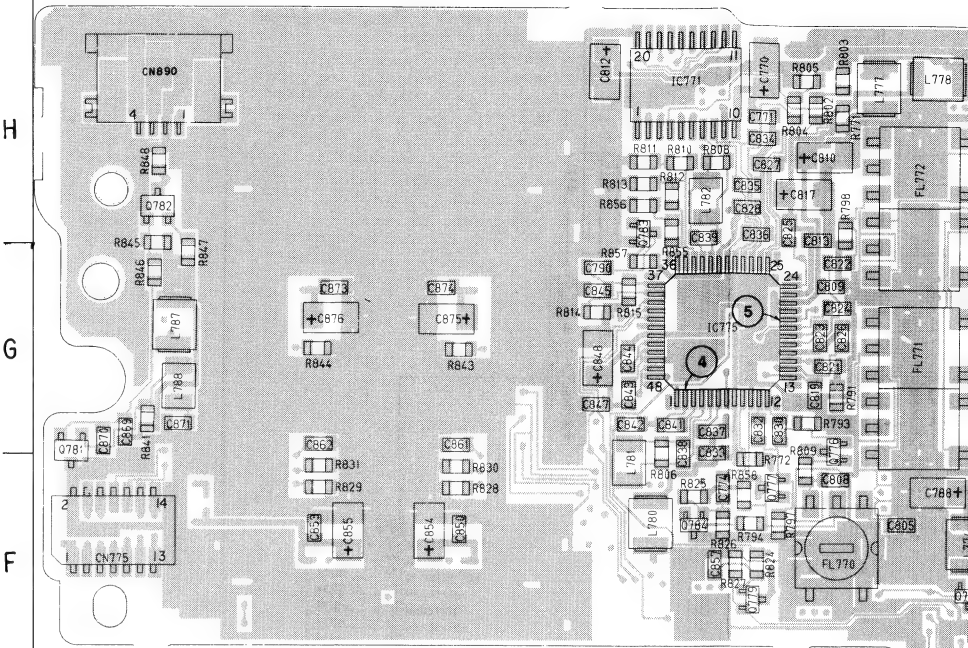


There are few cases that the part isn't mounted in this model is printed on this diagram.

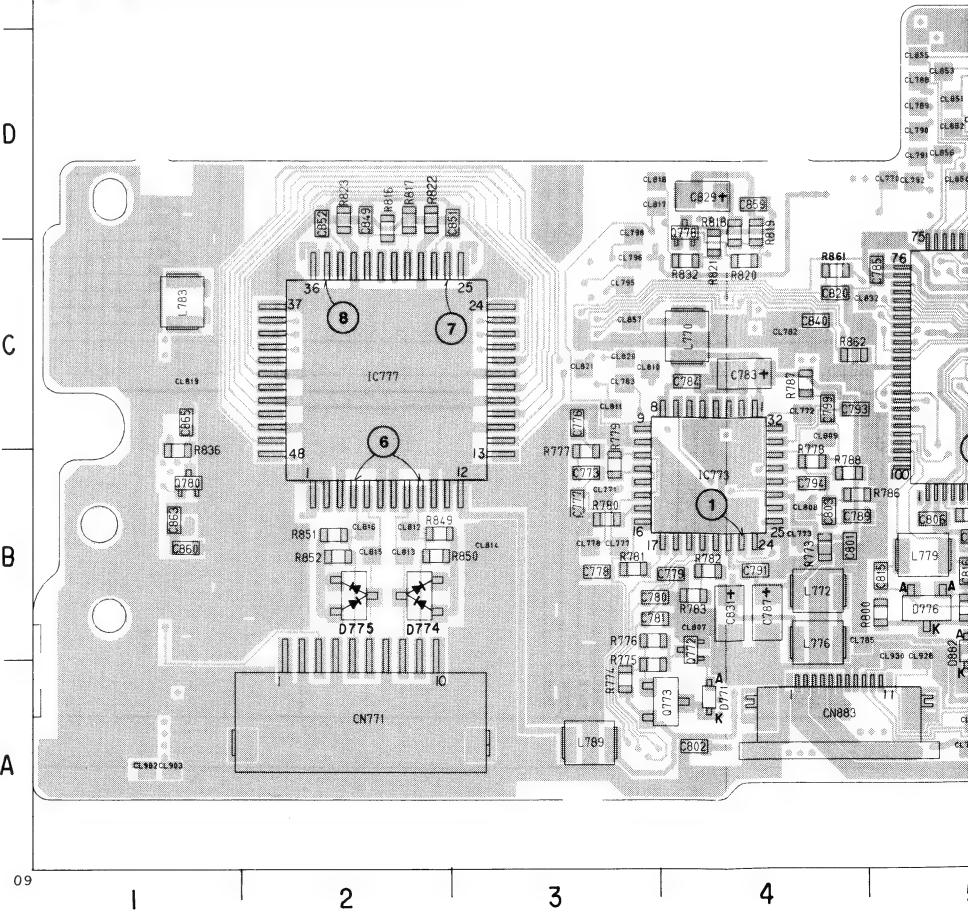
RS-63 BOARD

C770	H-4	C910	G-6	PS880	B-7	R906	H-8
C771	H-4	C911	G-7			R907	H-8
C772	C-6	C912	G-7	Q772	B-4	R908	G-8
C773	B-3	C913	H-9	Q773	A-4	R909	F-8
C774	F-4	C914	C-7	Q774	F-6	R910	F-6
C775	D-6	C915	C-7	Q775	F-5	R911	C-7
C776	C-3	C916	G-6	Q776	G-4	R912	F-7
C777	B-3	C917	F-6	Q777	F-4	R913	F-7
C778	B-3	C918	F-6	Q778	D-4	R914	C-7
C779	B-4	C919	B-7	Q779	F-4	R916	F-7
C780	B-3	C920	C-7	Q784	F-4	R917	G-7
C781	B-3	C921	C-7	Q880	H-6	R918	G-6
C782	D-6	C922	C-7	Q881	H-6	R919	G-7
C783	C-4	C923	C-7	Q882	H-6	R920	G-7
C784	C-4	C924	C-10	Q883	B-6	R921	G-6
C785	C-5	C925	C-10	Q885	F-6	R922	B-6
C786	F-5	C926	C-10	Q886	F-6	R924	G-7
C787	B-4	C927	B-8	Q887	D-7	R925	G-7
C788	F-5	C928	B-8	Q888	D-8	R926	B-6
C789	B-4	C929	B-8	Q889	C-9	R930	G-6
C791	B-4	C930	B-8	Q890	B-6	R931	F-7
C792	B-6	C931	B-7			R932	G-6
C793	C-4	C932	B-8	R770	C-6	R933	G-6
C794	B-4	C933	B-7	R771	H-4	R935	G-6
C795	F-6	C934	B-8	R774	A-3	R936	F-6
C796	G-5	C935	C-10	R776	B-3	R939	C-7
C797	G-5	C936	B-8	R777	B-3	R941	C-7
C798	G-6	C937	B-7	R778	B-4	R942	B-6
C799	C-4	C938	B-8	R779	B-3	R943	B-6
C800	F-5	C939	C-9	R780	B-3	R944	C-7
C801	B-4	C940	C-9	R781	B-3	R945	C-7
C802	A-4	C941	C-9	R782	B-4	R947	C-10
C803	B-4	C942	C-9	R783	B-4	R948	C-10
C804	B-6	C943	C-9	R784	G-5	R951	C-10
C806	B-5	C944	B-9	R785	G-5	R953	B-7
C809	G-4	C945	C-9	R786	B-4	R954	B-7
C810	H-4	C946	A-9	R787	C-4	R955	B-7
C811	B-5	C953	G-9	R788	B-4	R957	D-7
C814	B-5	C955	A-7	R789	F-5	R958	C-7
C815	B-5	C956	A-7	R790	F-5	R959	B-9
C816	B-5	C957	A-8	R791	G-4	R960	C-7
C818	B-5	C958	C-8	R792	B-5	R961	C-7
C819	G-4	C959	C-7	R793	G-4	R962	C-10
C821	G-4	C960	A-8	R794	F-4	R963	C-10
C822	G-4			R795	G-5	R964	B-8
C823	G-4	CN770	E-6	R796	B-5	R965	B-8
C824	G-4	CN771	A-2	R797	F-4	R966	B-8
C825	H-4	CN775	F-1	R798	H-4	R967	B-8
C826	G-4	CN880	H-1	R799	B-5	R969	B-9
C827	H-4	CN881	A-7	R800	B-5	R970	B-10
C828	H-4	CN882	A-6	R801	B-5	R971	C-9
C829	D-4	CN883	A-4	R802	H-4	R973	B-8
C830	G-4	CN884	C-8	R803	H-4	R974	C-9
C831	B-4	CN885	A-8	R804	H-4	R975	B-8
C832	G-4			R805	H-4	R976	B-8
C833	F-4	D771	A-4	R806	F-4	R977	B-8
C834	H-4	D772	F-5	R808	H-4	R980	H-6
C835	H-4	D773	B-5	R809	F-4	R981	C-7
C836	H-4	D774	B-2	R810	H-4		
C837	G-4	D775	B-2	R811	H-3	RB880	H-10
C838	F-4	D776	B-5	R812	H-4	RB881	G-10
C839	H-4	D883	D-7	R813	H-3	RB882	F-9
C841	G-4	D884	F-8	R814	G-3	RB883	G-10
C842	G-3			R815	G-3	RB884	H-10
C843	G-3	FL770	F-4	R816	D-2	RB885	G-9
C844	G-3	FL771	G-5	R817	D-2	RB886	G-9
C845	G-3	FL772	H-5	R818	D-4		
C847	G-3	FL880	H-6	R819	D-4	X880	H-9
C848	G-3	FL881	G-6	R820	C-4		
C849	D-2			R821	C-4		
C850	F-3	IC770	C-6	R822	D-2		
C853	F-2	IC771	H-4	R823	D-2		
C854	F-2	IC772	F-5	R824	D-2		
C855	F-2	IC773	B-4	R825	F-4		
C857	F-4	IC774	C-5	R826	F-4		
C859	D-4	IC775	G-4	R827	F-4		
C861	G-3	IC777	C-2	R828	F-3		
C862	G-2	IC880	G-9	R829	F-2		
C873	G-2	IC881	H-7	R830	F-3		
C874	G-2	IC882	B-7	R831	F-2		
C875	G-2	IC883	F-8	R832	C-4		
C876	G-2	IC885	F-7	R843	G-3		
C880	G-9	IC886	C-6	R844	G-2		
C881	G-9	IC887	C-10	R849	G-2		
C882	F-8	IC888	B-8	R850	B-2		
C883	H-7	IC889	B-9	R851	B-2		
C884	H-7			R852	B-2		
C885	C-9	L770	C-4	R855	H-4		
C886	F-9	L772	B-4	R856	H-3		
C887	G-6	L773	G-6	R858	F-4		
C888	H-7	L774	F-5	R861	C-4		
C889	H-7	L776	B-4	R862	C-4		
C890	H-7	L777	H-5	R880	F-8		
C891	H-7	L779	B-5	R881	G-10		
C892	H-8	L780	F-3	R885	G-9		
C893	B-7	L781	F-3	R886	G-10		
C894	H-7	L782	H-4	R887	F-9		
C895	H-8	L783	C-1	R888	F-9		
C896	H-8	L789	A-3	R889	F-9		
C897	G-8	L791	B-6	R891	C-9		
C898	G-8	L880	G-8	R893	G-6		
C899	F-7	L881	G-8	R894	H-7		
C900	F-7	L883	D-7	R895	H-6		
C901	F-6	L884	C-8	R896	H-6		
C902	C-7	L885	C-9	R897	H-6		
C903	G-8	L886	C-8	R898	H-6		
C904	G-7	L887	C-9	R900	B-6		
C905	G-7	L888	C-8	R901	B-6		
C906	G-7	L889	C-9	R902	H-8		
C907	G-8	L890	C-7	R903	B-7		
C908	F-7	L891	B-5	R904	B-7		
C909	G-7			R905	G-7		

RS-63 BOARD (COMPONENT SIDE)



RS-63 BOARD (CONDUCTOR SIDE)



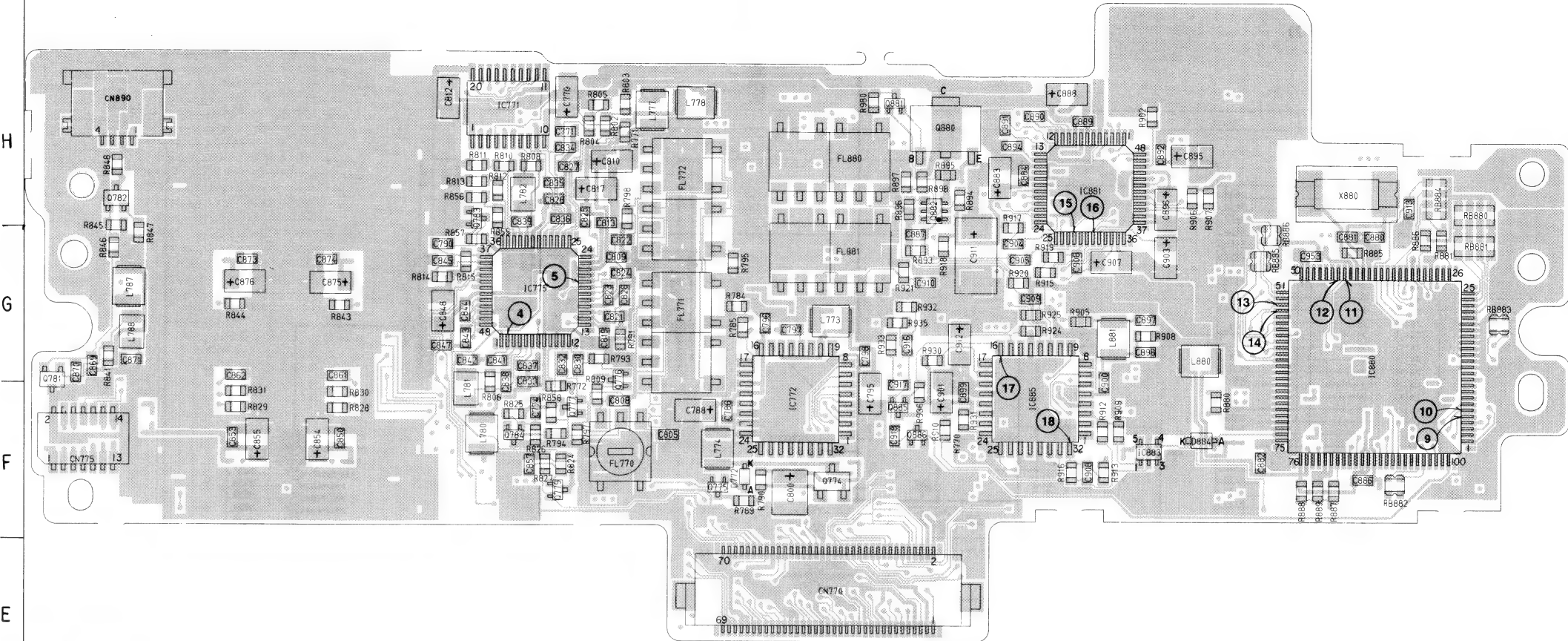
RS-63 (VIDEO RF, MECHA CONTROL, SERVO) PRINTED WIRING BOARD

— Ref. No. RS-63 BOARD: 4000 series —

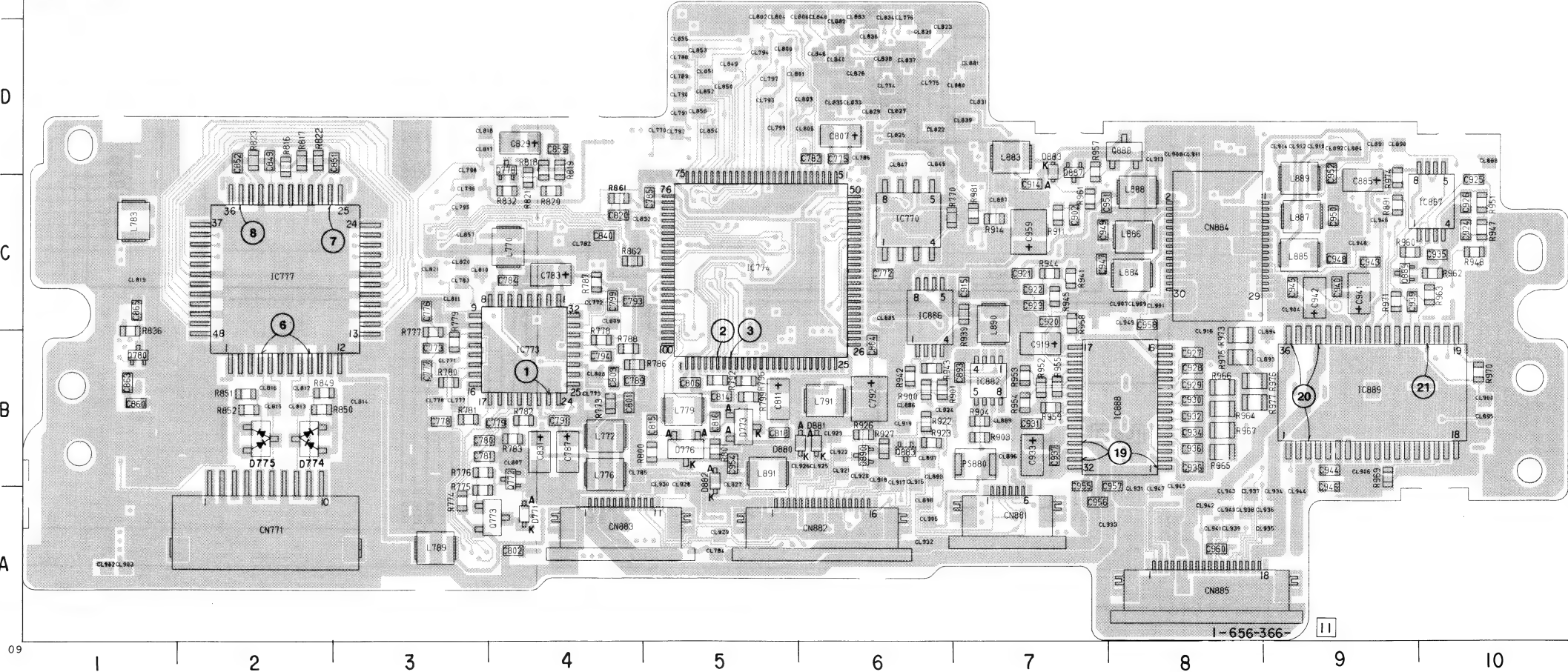
RS-63 BOARD

C770	H-4	C910	G-6	PS880	B-7	R906	H-8
C771	H-4	C911	G-7			R907	H-8
C772	C-6	C912	G-7	Q772	B-4	R908	G-8
C773	B-3	C913	H-9	Q773	A-4	R909	F-8
C774	F-4	C914	C-7	Q774	F-6	R910	F-6
C775	D-6	C915	C-7	Q775	F-5	R911	C-7
C776	C-3	C916	G-6	Q776	G-4	R912	F-7
C777	B-3	C917	F-6	Q777	F-4	R913	F-7
C778	B-3	C918	F-6	Q778	D-4	R914	C-7
C779	B-4	C919	B-7	Q779	F-4	R916	F-7
C780	B-3	C920	C-7	Q784	F-4	R917	G-7
C781	B-3	C921	C-7	Q880	H-6	R918	G-6
C782	D-6	C922	C-7	Q881	H-6	R919	G-7
C783	C-4	C923	C-7	Q882	H-6	R920	G-7
C784	C-4	C924	C-10	Q883	B-6	R921	G-6
C785	C-5	C925	C-10	Q885	F-6	R922	B-6
C786	F-5	C926	C-10	Q886	F-6	R924	G-7
C787	B-4	C927	B-8	Q887	D-7	R925	G-7
C788	F-5	C928	B-8	Q888	D-8	R926	B-6
C789	B-4	C929	B-8	Q889	C-9	R930	G-6
C791	B-4	C930	B-8	Q890	B-6	R931	F-7
C792	B-6	C931	B-7			R932	G-6
C793	C-4	C932	B-8	R770	C-6	R933	G-6
C794	B-4	C933	B-7	R771	H-4	R935	G-6
C795	F-6	C934	C-10	R774	A-3	R936	F-6
C796	C-6	C935	C-10	R776	B-3	R939	C-7
C797	C-6	C936	B-7	R777	B-3	R941	C-7
C798	C-6	C937	B-7	R778	B-3	R942	B-6
C799	C-4	C938	C-9	R779	B-3	R943	B-6
C800	C-5	C939	C-9	R780	B-3	R944	C-7
C801	B-4	C940	C-9	R781	B-3	R945	C-7
C802	A-4	C941	C-9	R782	B-4	R947	C-7
C803	B-4	C942	C-9	R783	B-4	R948	C-10
C804	B-6	C943	C-9	R784	C-5	R951	C-10
C806	B-5	C944	B-9	R785	C-5	R953	B-7
C809	G-4	C945	C-9	R786	B-4	R954	B-7
C810	H-4	C946	A-9	R787	C-4	R955	B-7
C811	B-5	C953	G-9	R788	B-4	R957	D-7
C814	B-5	C955	A-7	R789	F-5	R958	C-7
C815	B-5	C956	A-7	R790	F-5	R959	B-7
C816	B-5	C957	A-8	R791	G-4	R960	C-9
C818	B-5	C958	C-8	R792	B-5	R961	C-7
C819	G-4	C959	C-7	R793	G-4	R962	C-10
C821	C-4	C960	A-8	R794	F-4	R963	C-10
C822	G-4			R795	G-5	R964	B-8
C823	G-4	CN770	E-6	R796	B-5	R965	B-8
C824	G-4	CN771	A-2	R797	F-4	R966	B-8
C825	H-4	CN775	F-1	R798	H-4	R967	B-8
C826	G-4	CN880	H-1	R799	B-5	R969	B-9
C827	H-4	CN881	A-7	R800	B-5	R970	B-10
C828	H-4	CN882	A-6	R801	B-5	R971	C-9
C829	D-4	CN883	A-4	R802	H-4	R973	D-8
C830	G-4	CN884	C-8	R803	H-4	R974	C-9
C831	B-4	CN885	A-8	R804	H-4	R975	B-8
C832	G-4			R805	H-4	R976	B-8
C833	F-4	D771	A-4	R806	F-4	R977	B-8
C834	H-4	D772	F-5	R808	H-4	R980	H-6
C835	H-4	D773	B-5	R809	F-4	R981	C-7
C836	H-4	D774	B-2	R810	H-4		
C837	G-4	D775	B-2	R811	H-3	RB880	H-10
C838	F-4	D776	B-5	R812	H-4	RB881	G-10
C839	H-4	D883	D-7	R813	H-3	RB882	F-9
C841	G-4	D884	F-8	R814	G-3	RB883	G-10
C842	G-3			R815	G-3	RB884	H-10
C843	G-3	FL770	F-4	R816	D-2	RB885	G-9
C844	G-3	FL771	G-5	R817	D-2	RB886	G-9
C845	G-3	FL772	H-5	R818	D-4		
C847	G-3	FL880	H-6	R819	D-4	X880	H-9
C848	G-3	FL881	G-6	R820	C-4		
C849	D-2			R821	C-4		
C850	F-3	IC770	C-6	R822	D-2		
C853	F-2	IC771	H-4	R823	D-2		
C854	F-2	IC772	F-5	R824	F-4		
C855	F-2	IC773	B-4	R825	F-4		
C857	F-4	IC774	C-5	R826	F-4		
C859	D-4	IC775	G-4	R827	F-4		
C861	G-3	IC777	C-2	R828	F-3		
C862	G-2	IC880	G-9	R829	F-2		
C873	G-2	IC881	H-7	R830	F-3		
C874	G-2	IC882	B-7	R831	F-2		
C875	G-2	IC883	F-8	R832	C-4		
C876	G-2	IC885	F-7	R843	G-3		
C880	G-9	IC886	C-6	R844	G-2		
C881	G-9	IC887	C-10	R849	B-2		
C882	F-8	IC888	B-8	R850	B-2		
C883	H-7	IC889	B-9	R851	B-2		
C884	H-7			R852	B-2		
C885	C-9	L770	C-4	R855	H-4		
C886	F-9	L772	B-4	R856	H-3		
C887	G-6	L773	G-6	R858	F-4		
C888	H-7	L774	F-5	R861	C-4		
C889	H-7	L776	B-4	R862	C-4		
C890	H-7	L777	H-5	R880	F-8		
C891	H-7	L779	B-5	R881	G-10		
C892	H-8	L780	F-3	R885	G-9		
C893	B-7	L781	F-3	R886	G-10		
C894	H-7	L782	H-4	R887	F-9		
C895	H-8	L783	C-1	R888	F-9		
C896	H-8	L789	A-3	R889	F-9		
C897	G-8	L791	B-6	R891	C-9		
C898	G-8	L880	G-8	R893	G-6		
C899	F-7	L881	G-8	R894	H-7		
C900	F-7	L883	D-7	R895	H-6		
C901	F-6	L884	C-8	R896	H-6		
C902	C-7	L885	C-9	R897	H-6		
C903	G-8	L886	C-8	R898	H-6		
C904	G-7	L887	C-9	R900	B-6		
C905	G-7	L888	C-8	R901	B-6		
C906	G-7	L889	C-9	R902	H-8		
C907	G-8	L890	C-7	R903	B-7		
C908	F-7	L891	B-5	R904	B-7		
C909	G-7			R905	G-7		

RS-63 BOARD (COMPONENT SIDE)

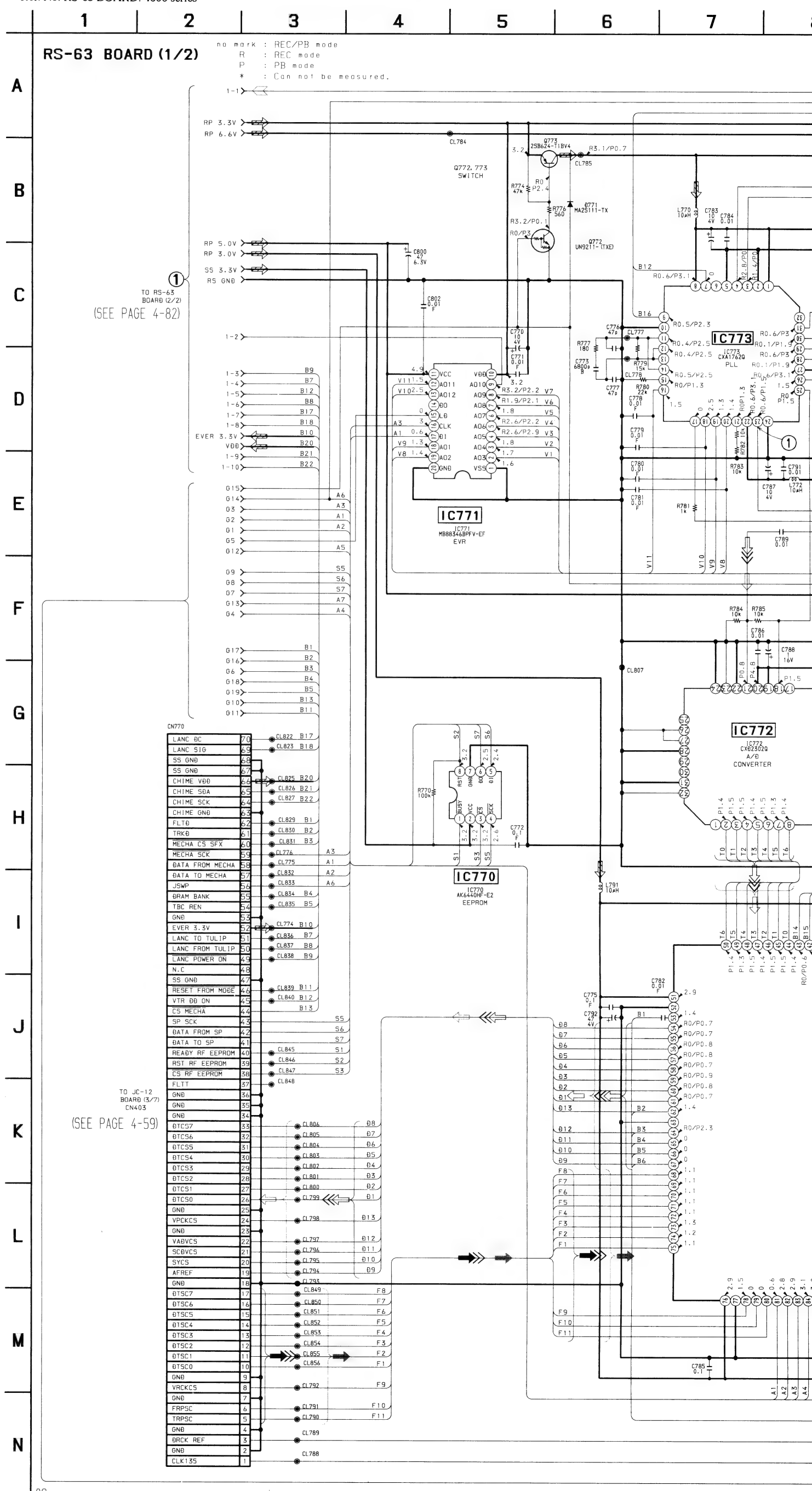


RS-63 BOARD (CONDUCTOR SIDE)



— Ref. No. RS-63 BOARD: 4000 series —

— Ref. No. RS-63 BOARD: 4000 series —



<p>1</p> <p>4.1845MHz 0.6Vp-p</p> <p>IC773 (23) PB</p>	<p>8</p> <p>6.4 msec 0.3Vp-p</p> <p>IC777 (35) PB</p>
<p>2</p> <p>2.6Vp-p 0.032µsec</p> <p>IC774 (6) REC</p>	<p>9</p> <p>3Vp-p 6.6 msec</p> <p>IC880 (5) REC/PB</p>
<p>3</p> <p>3.2Vp-p 0.024µsec</p> <p>IC774 (8) REC</p>	<p>10</p> <p>3.2Vp-p 3.3 msec</p> <p>IC880 (6) REC/PB</p>
<p>4</p> <p>0.28Vp-p 3.4 msec</p> <p>IC775 (2) PB</p>	<p>11</p> <p>3.2Vp-p 25.6 msec</p> <p>IC880 (43) REC/PB</p>
<p>5</p> <p>2.5Vp-p NTSC 6.4 msec PAL 3.3 msec</p> <p>IC775 (20) PB</p>	<p>12</p> <p>3.1Vp-p 25.6 msec</p> <p>IC880 (44) REC/PB</p>
<p>6</p> <p>0.49Vp-p 0.044µsec</p> <p>IC777 (4) (9) REC</p>	<p>13</p> <p>2.8Vp-p 6.7 msec</p> <p>IC880 (53) REC/PB</p>
<p>7</p> <p>0.3Vp-p 6.4 msec</p> <p>IC777 (26) PB</p>	<p>14</p> <p>2.8Vp-p NTSC 34 msec PAL 38 msec</p> <p>IC880 (54) REC/PB</p>

DCR-VX1000 : NTSC model
DCR-VX1000E : PAL model

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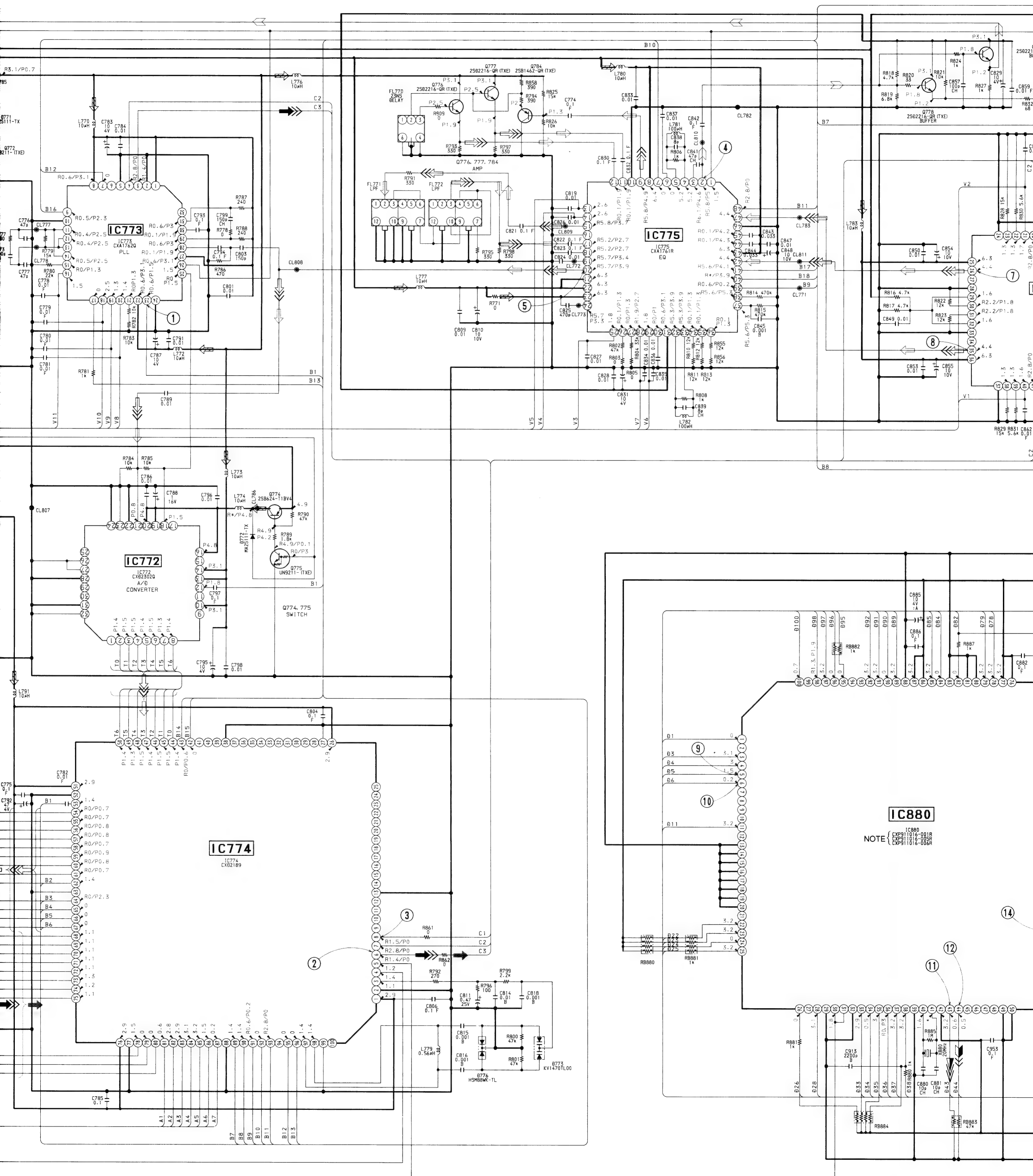
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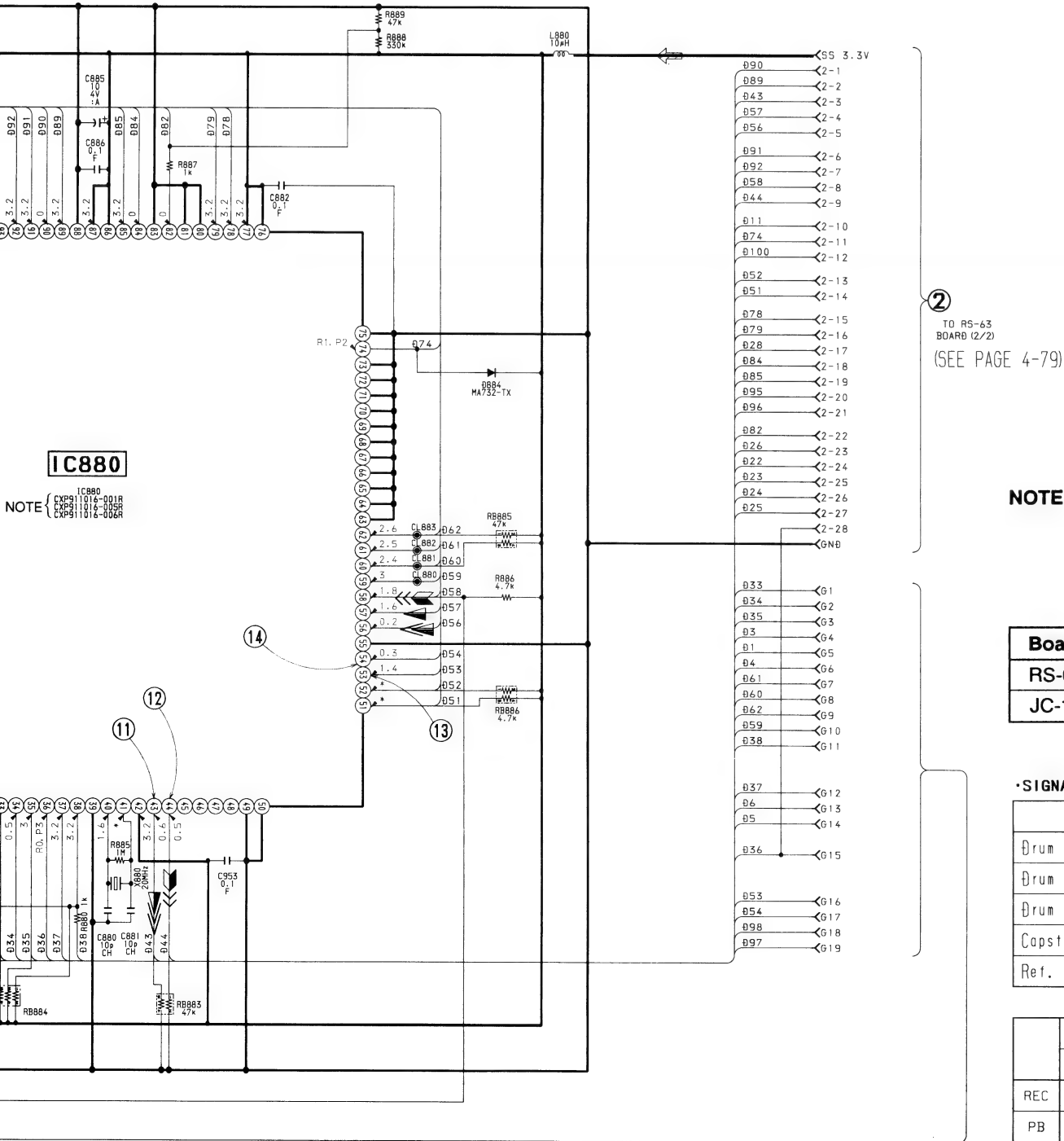
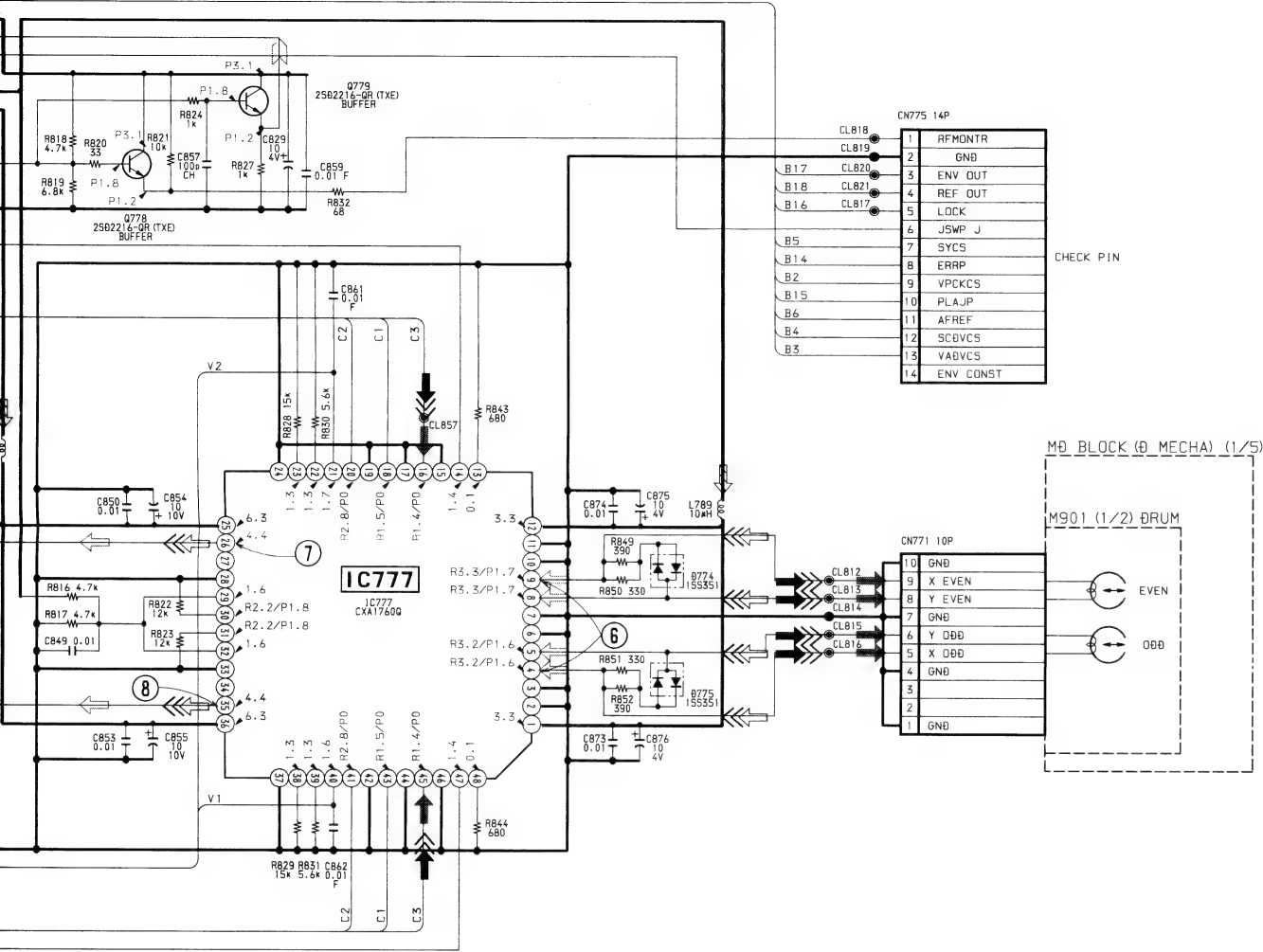
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DCR-VX1000:NTSC model
DCR-VX1000E:PAL model



NOTE: The IC880 has three types as shown in the following table, but only "TYPE 3 (CXP911016-006R)" is supplied as a repair parts. When replacing the IC880 on a set which is mounted with the parts of TYPE 1 and TYPE 2, be sure to replace simultaneously the IC409 (TYPE 3: CXP911016-007R) on the JC-12 board as well. (There is no interchangeability between types.)

Board	Drawing No.	TYPE 1	TYPE 2	TYPE 3
RS-63	IC880	CXP911016-001R	CXP911016-005R	CXP911016-006R
JC-12	IC409	CXP911016-002R	CXP911016-004R	CXP911016-007R

SIGNAL PATH

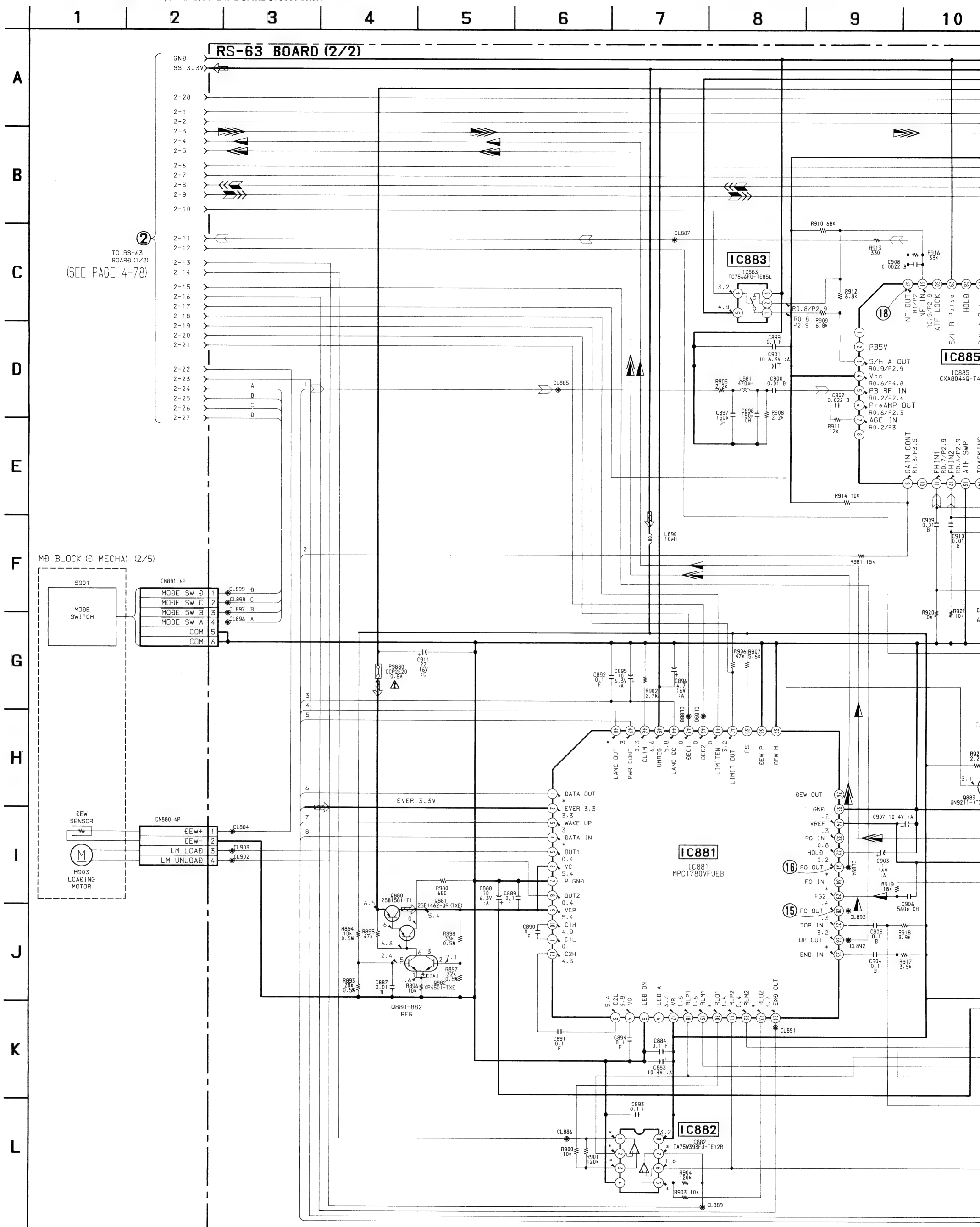
	REC	REC/PB	PB
Drum speed servo		▶	
Drum phase servo		▶▶	
Drum servo (speed and phase)		▶▶▶	
Capstan servo (speed and phase)		▶▶▶▶	
Ref. signal			Σ

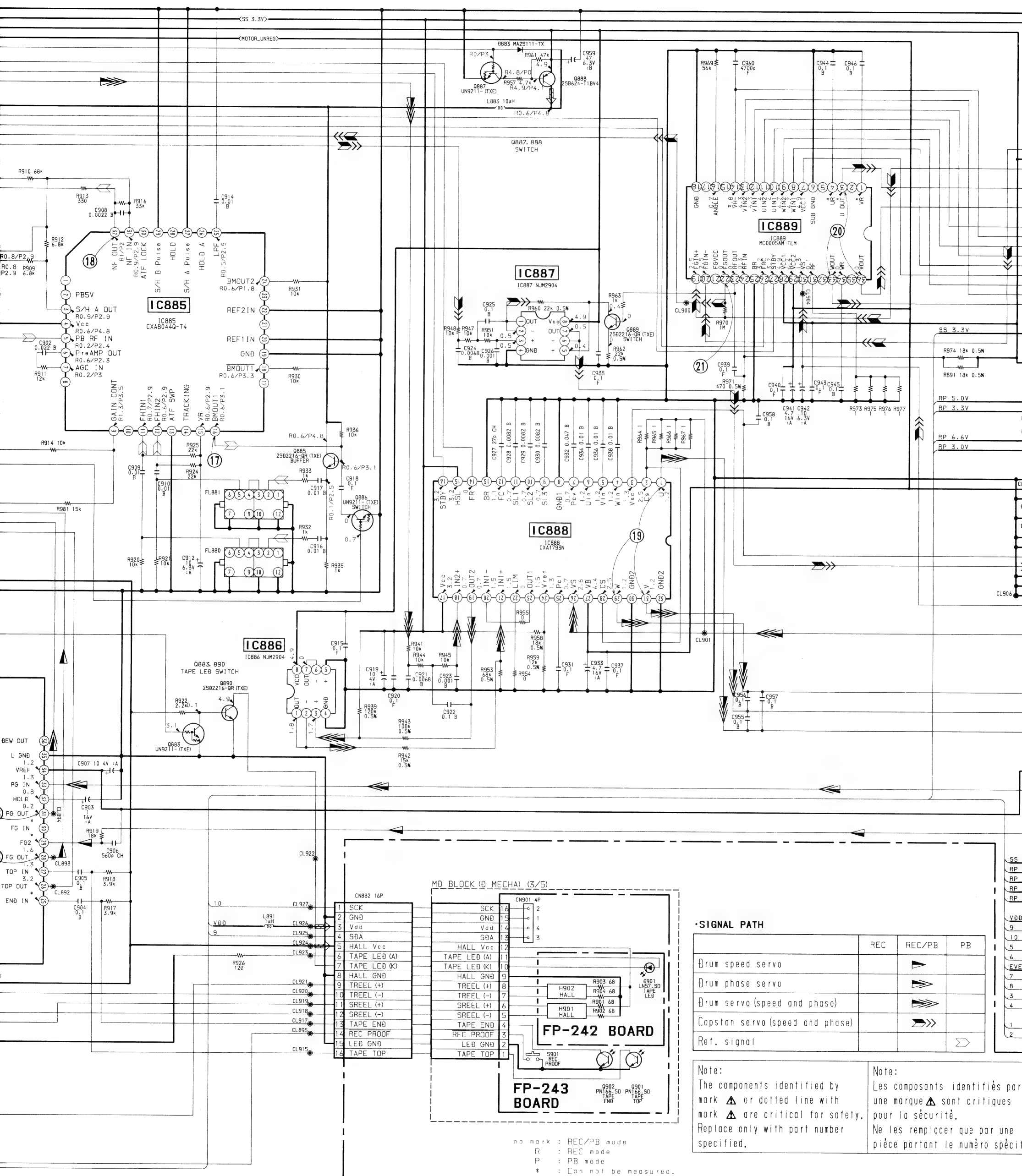
	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA	
REC			▶▶▶	▶
PB			◀▶▶	◀

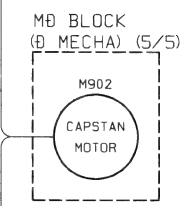
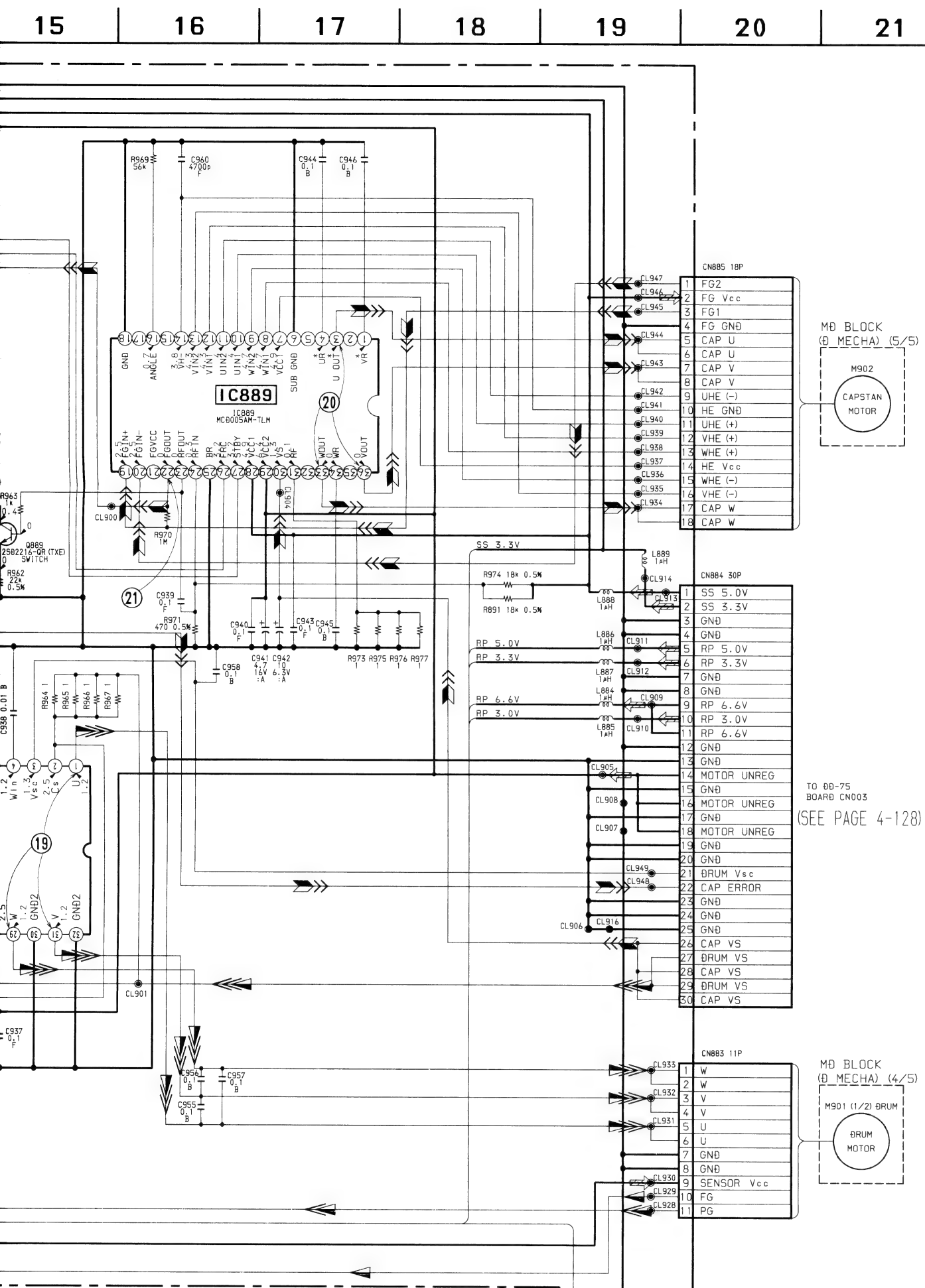
RS-63 (SERVO), FP-242, FP-243 (TAPE SENSOR) SCHEMATIC DIAGRAMS

— Ref. No. RS-63 BOARD: 4000 series, FP-242, FP-243 BOARDS: 5000 series —

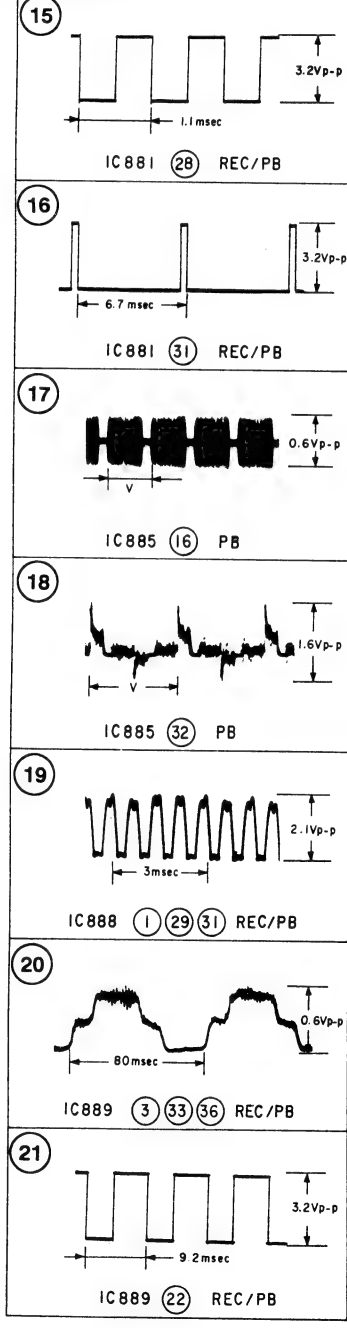
- Refer to page 4--73 for Printed Wiring Board.







RS-63 BOARD (2/2)



•SIGNAL PATH

	REC	REC/PB	PB
Drum speed servo		▶	
Drum phase servo		▶▶	
Drum servo (speed and phase)		▶▶▶	
Capstan servo (speed and phase)		▶▶▶	
Ref. signal			▶▶▶▶

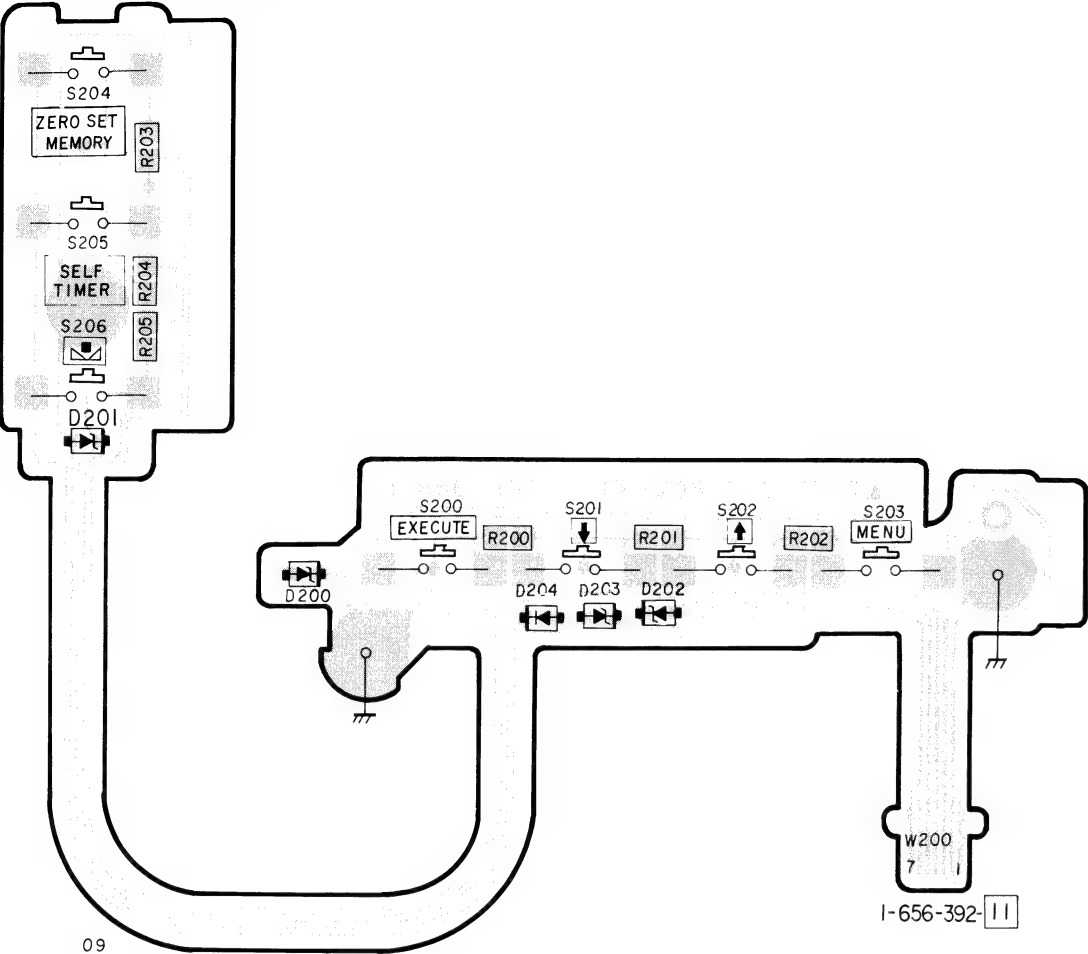
Note:
The components identified by mark **▲** or dotted line with mark **▲** are critical for safety. Replace only with part number specified.

Note:
Les composants identifiés par une marque **▲** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

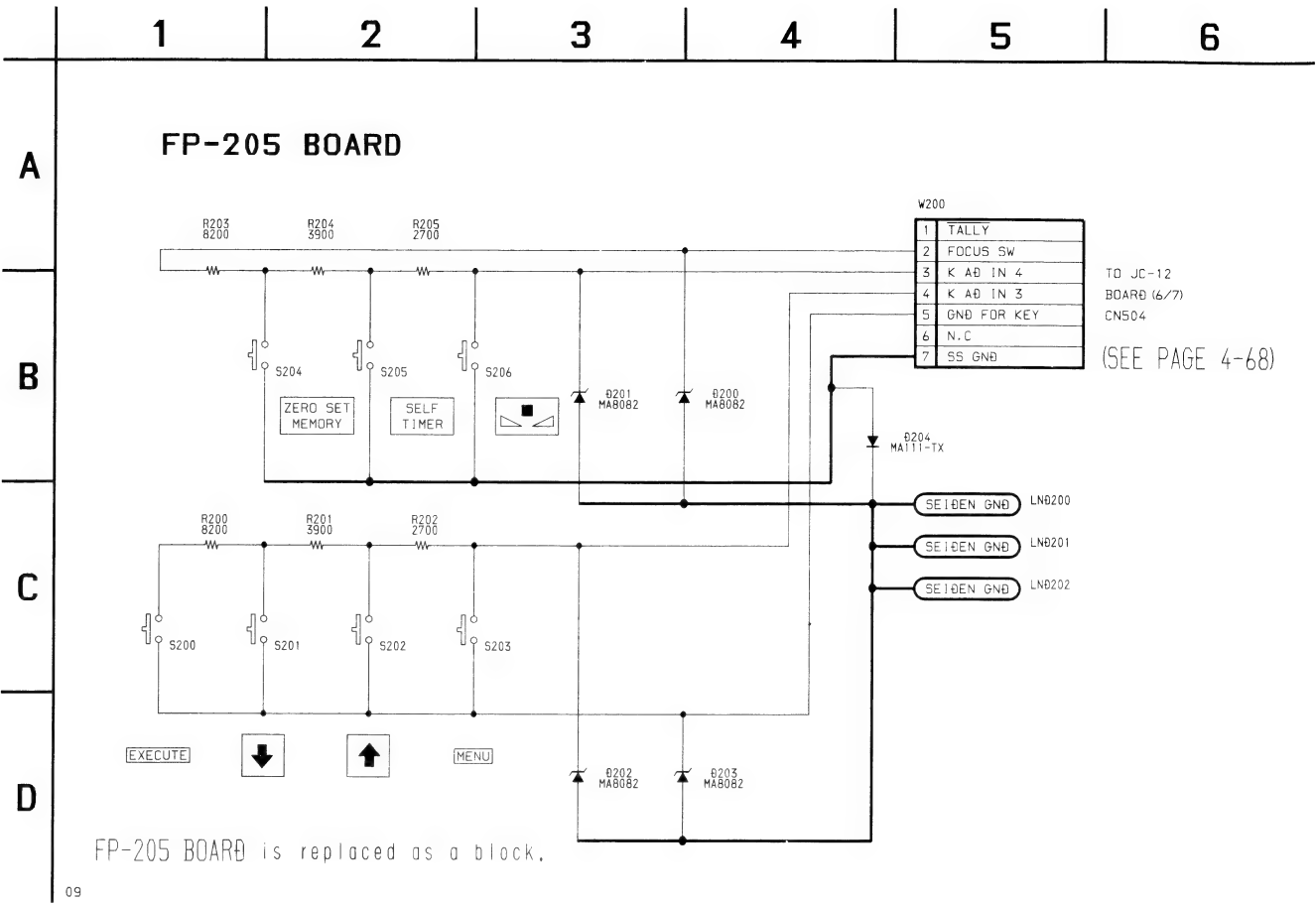
①
TO RS-63 BOARD (1/2)
(SEE PAGE 4-75)

FP-205 (SWITCH) PRINTED WIRING BOARD

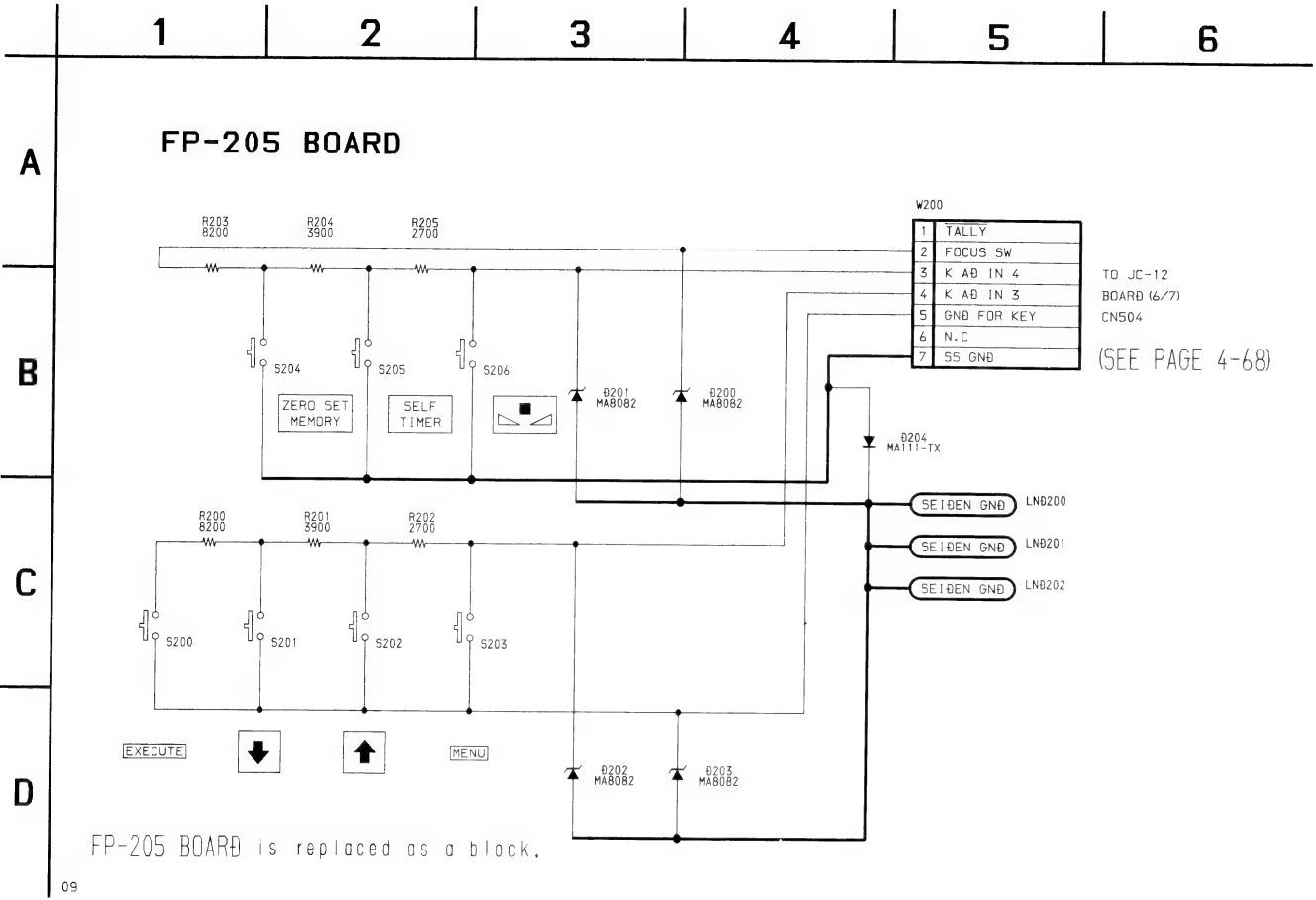
FP-205 BOARD



FP-205 (SWITCH) SCHEMATIC DIAGRAM



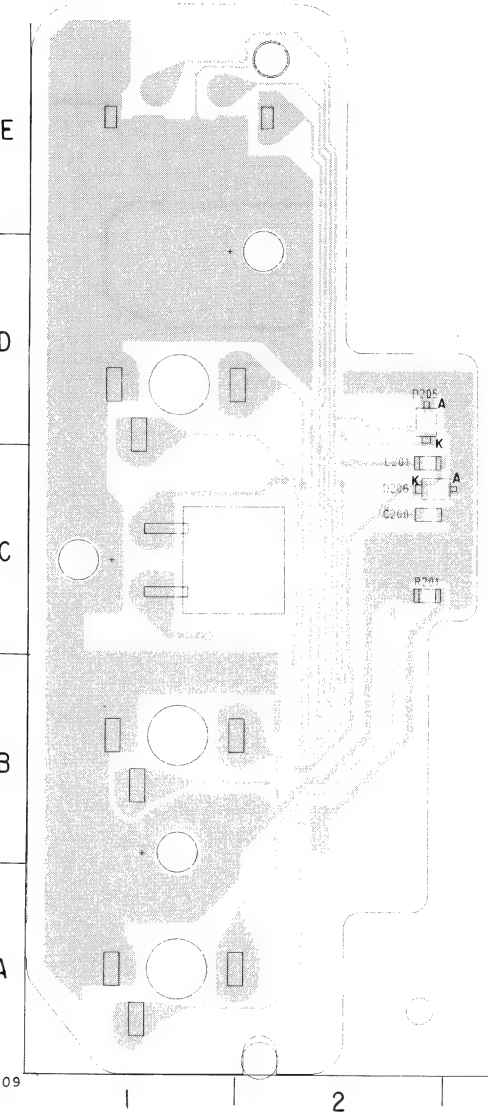
FP-205 (SWITCH) SCHEMATIC DIAGRAM



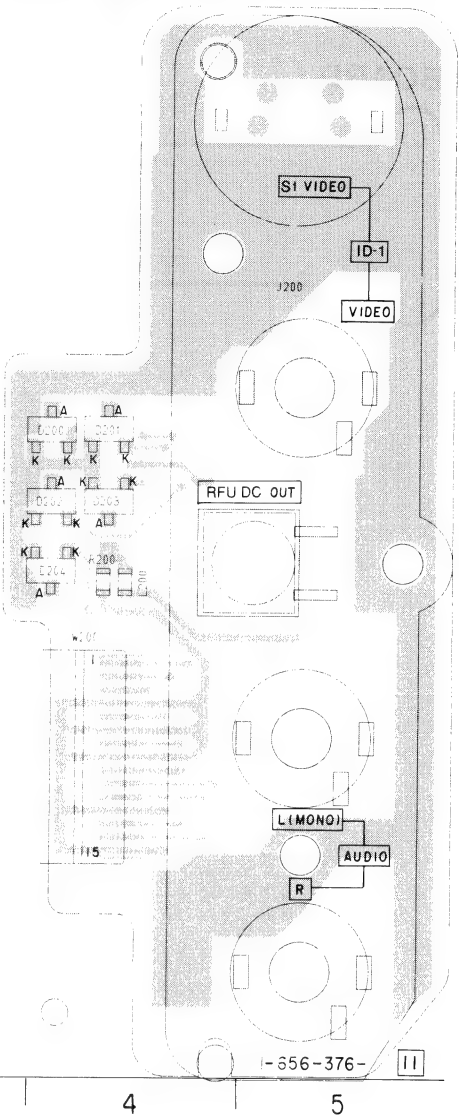
JK-126 (JACK) PRINTED WIRING BOARD

— Ref. No. JK-126 BOARD: 5000 series —

JK-126 BOARD (COMPONENT SIDE)

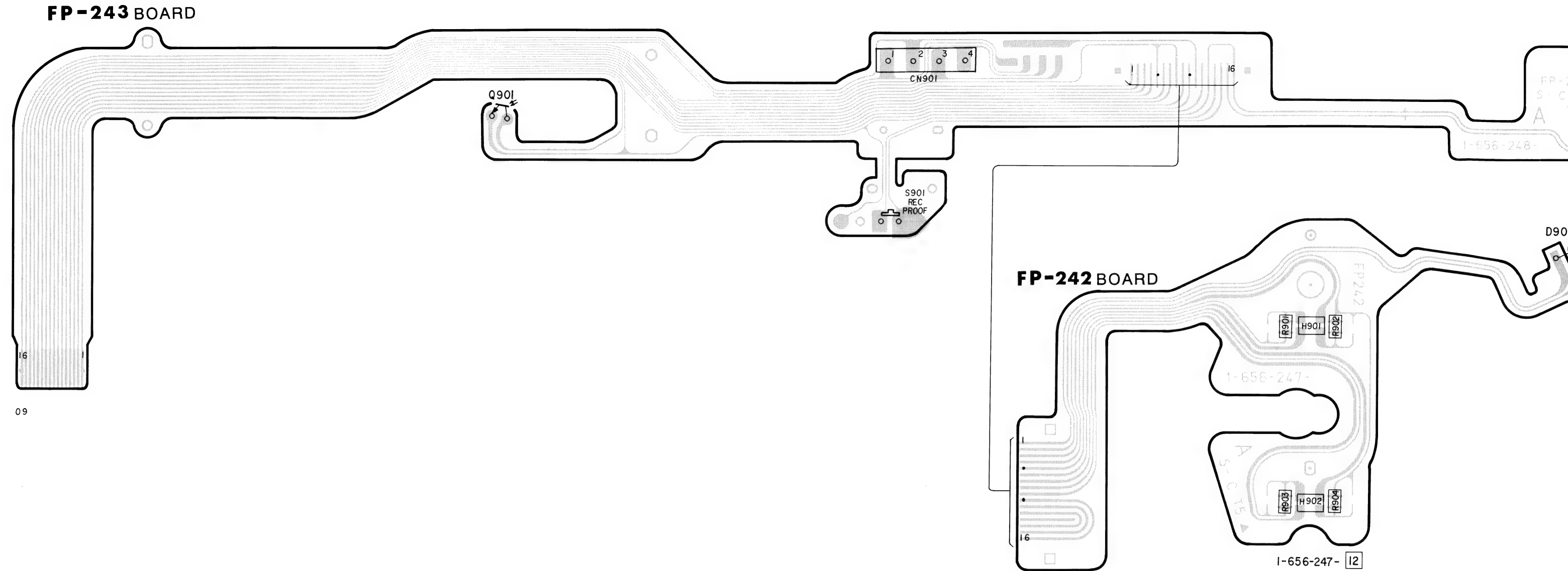


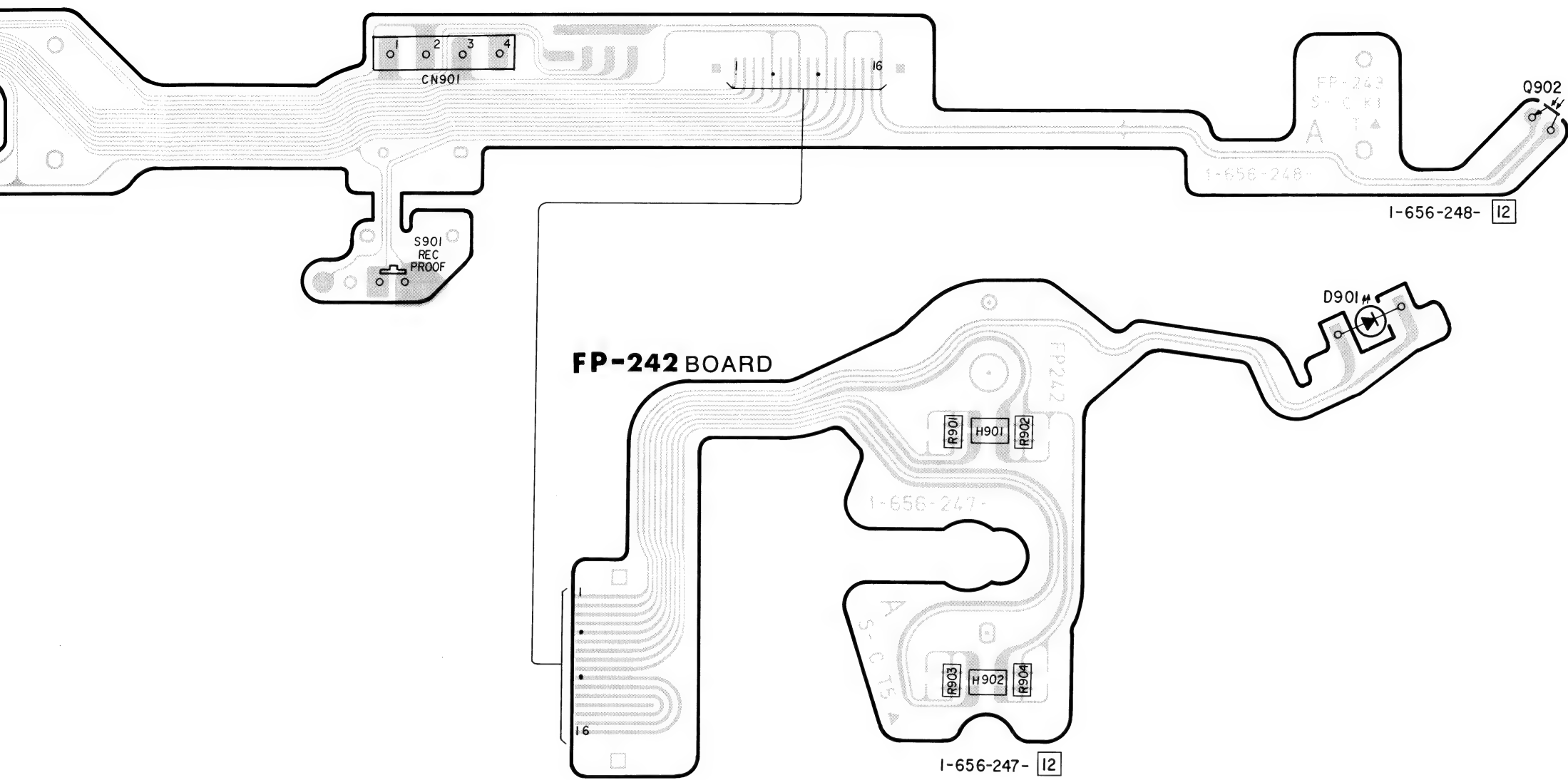
JK-126 BOARD (CONDUCTOR SIDE)



JK-126 BOARD

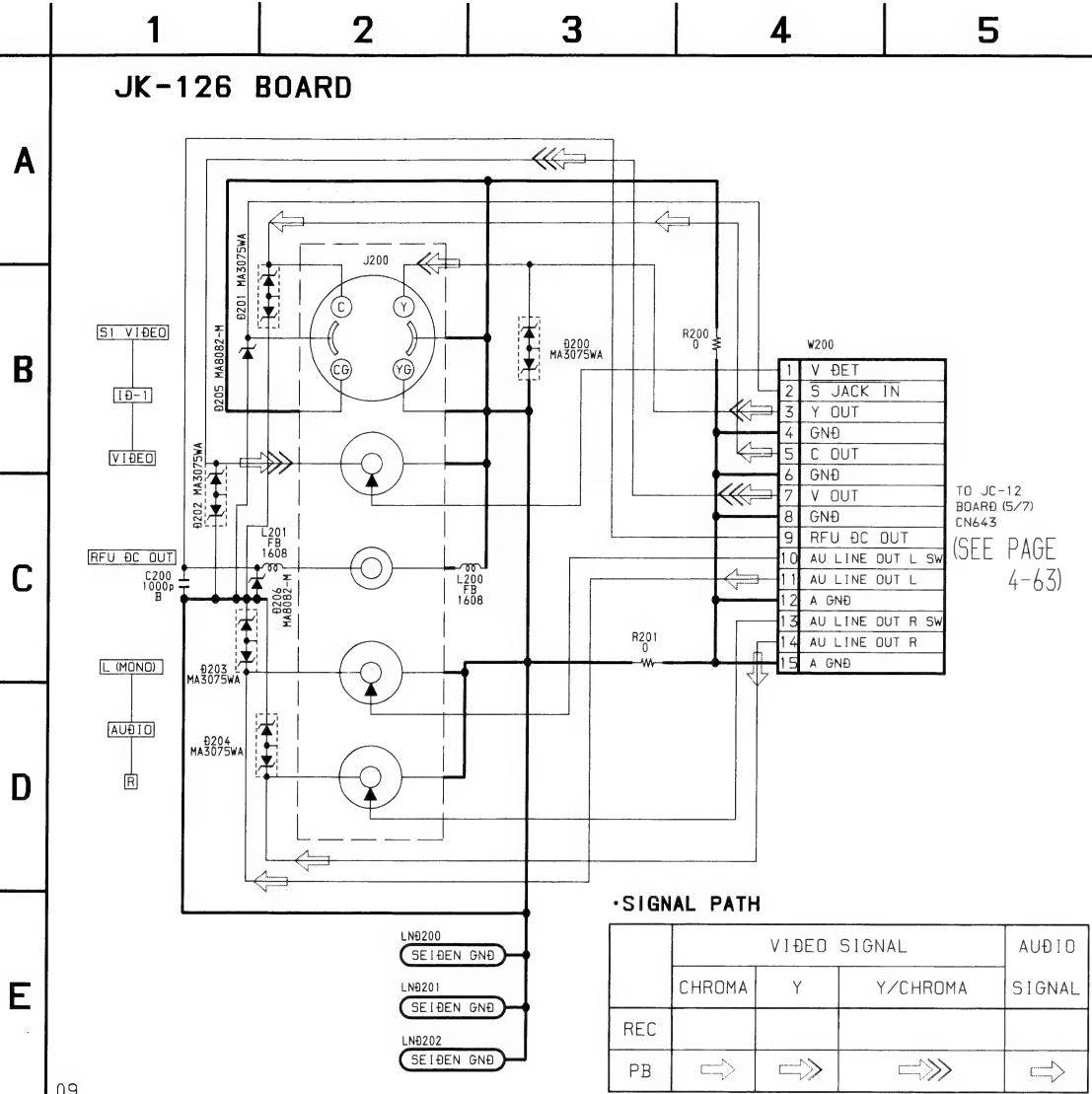
C200	C-2
D200	D-4
D201	D-4
D202	C-4
D203	C-4
D204	C-4
D205	D-2
D206	C-2
J200	D-5
L200	C-4
L201	C-2
R200	C-4
R201	C-2
W200	B-4





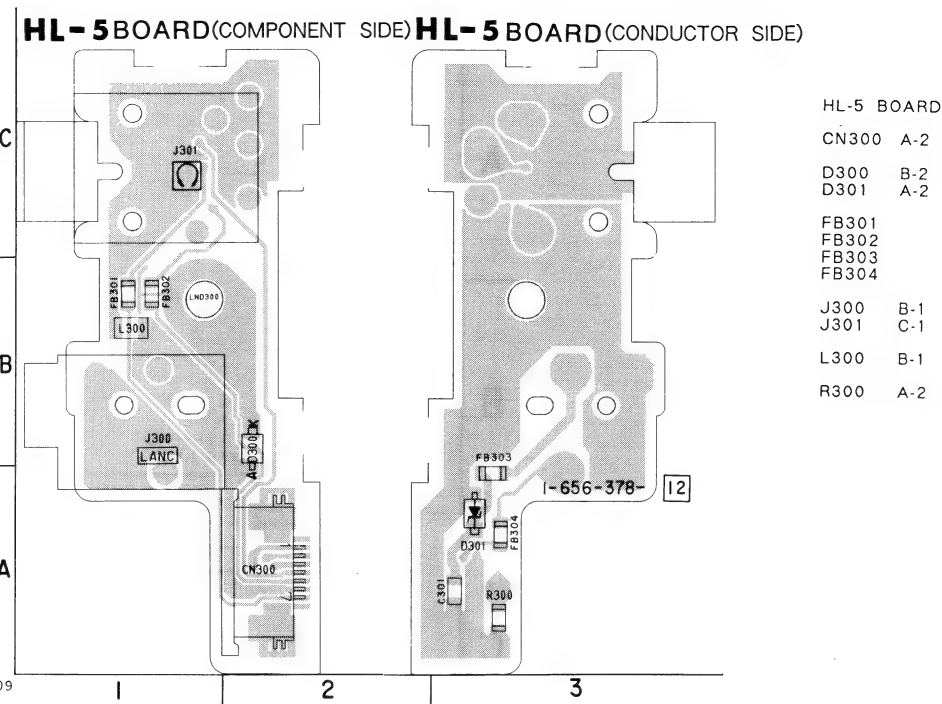
JK-126 (JACK) SCHEMATIC DIAGRAM

— Ref. No. JK-126 BOARD: 5000 series —



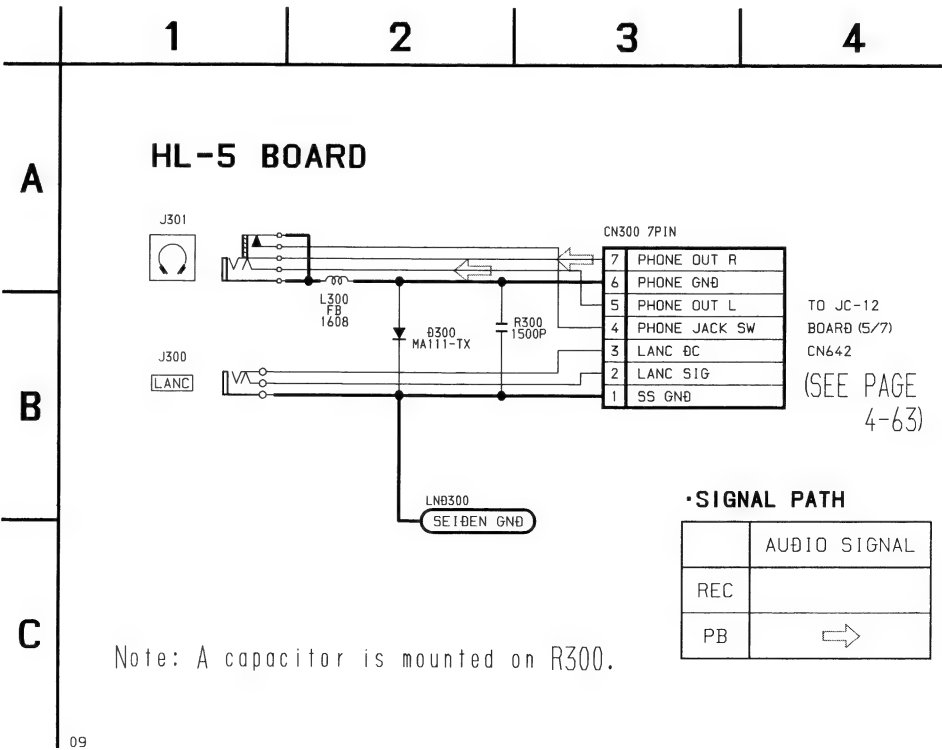
HL-5 (HEADPHONE/LANC) PRINTED WIRING BOARD

— Ref. No. HL-5 BOARD: 5000 series —



HL-5 (HEADPHONE/LANC) SCHEMATIC DIAGRAM

— Ref. No. HL-5 BOARD: 5000 series —



— Ref. No. FT-84, MI-24 BOARDS: 6000 series —

— Ref. No. FT-84, MI-24 BOARDS: 6000 series —

MENT SIDE)

OR SIDE)

FT-84 BOARD

C201 C-1
CN201 A-1
D201 C-1
IC201 C-2
R202 C-2

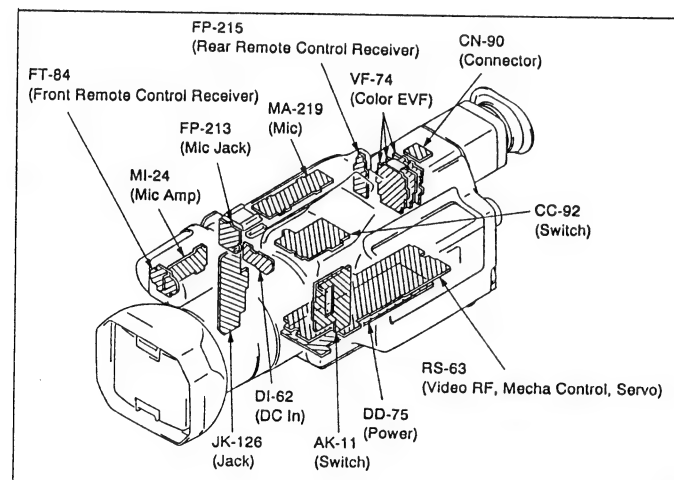
MI-24 BOARD

C701 C-3
C702 A-2
C703 A-1
C704 A-2
C705 C-1
C706 C-2
C707 C-1
C708 C-2
C709 C-2
C710 A-2
C711 C-2
C712 C-2
C713 A-2
C714 C-2
C721 C-1

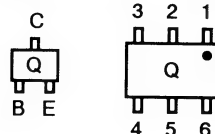
CN701 C-3
CN702 C-2
CN703 B-2
CN704 C-1

IC701 C-2
Q701 A-3
Q702 A-3

R701 C-3
R704 C-1
R705 A-1
R706 A-2
R707 A-2
R708 A-2
R709 A-3
R710 A-3
R711 A-2
R714 C-2
R715 C-3
R721 C-1
R722 C-1

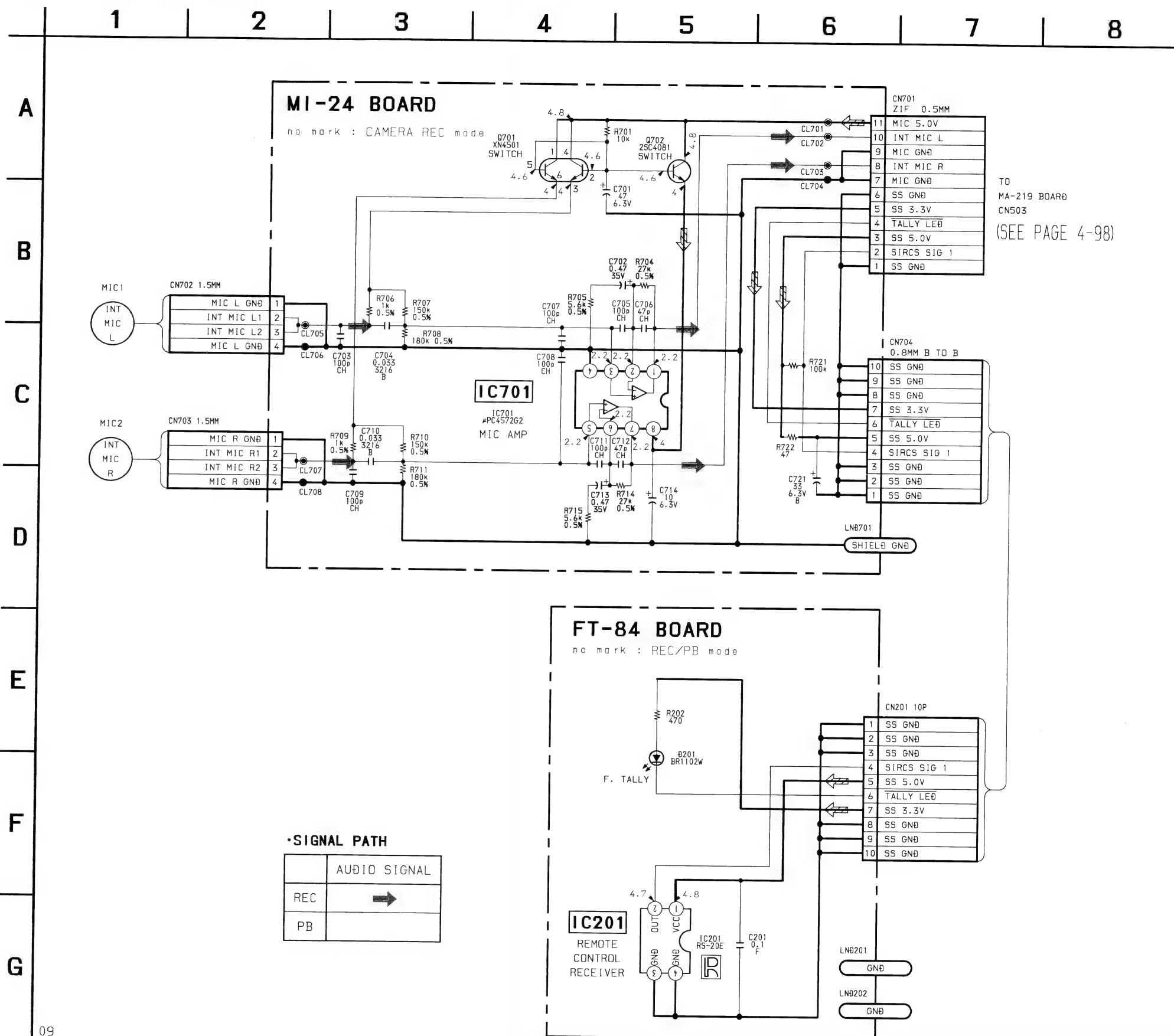


- For printed wiring boards.
- FT-84, MI-24 boards are a four-layer print board. However, the patterns of layers 2 to 3 have not been included in the diagram.
- Chip transistor



FT-84 (FRONT REMOTE CONTROL RECEIVER), MI-24 (MIC AMP) SCHEMATIC DIAGRAMS

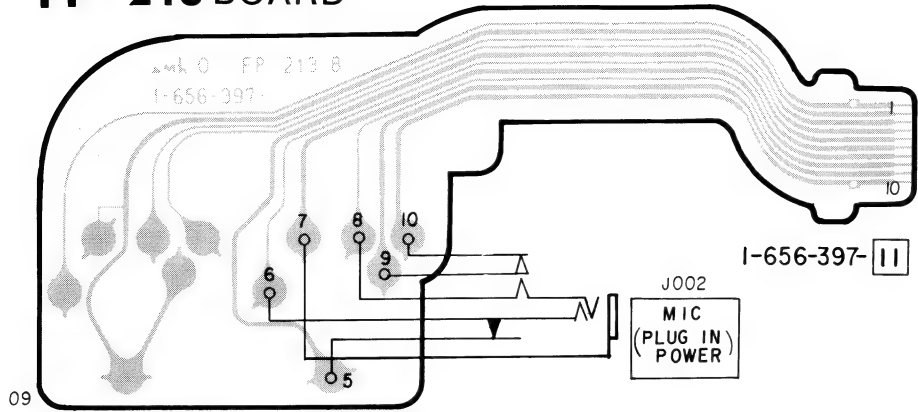
— Ref. No. FT-84, MI-24 BOARDS: 6000 series —



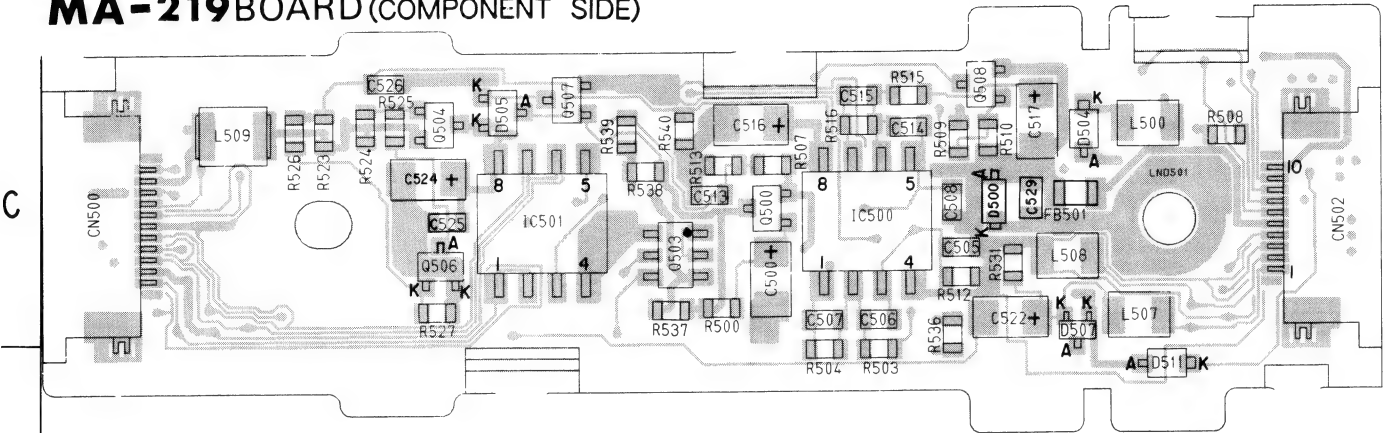
MA-219 (MIC), FP-213 (MIC JACK) PRINTED WIRING BOARDS
 — Ref. No. MA-219, FP-213 BOARDS: 6000 series —

There are few cases that the part isn't mounted in this model is printed on this diagram.

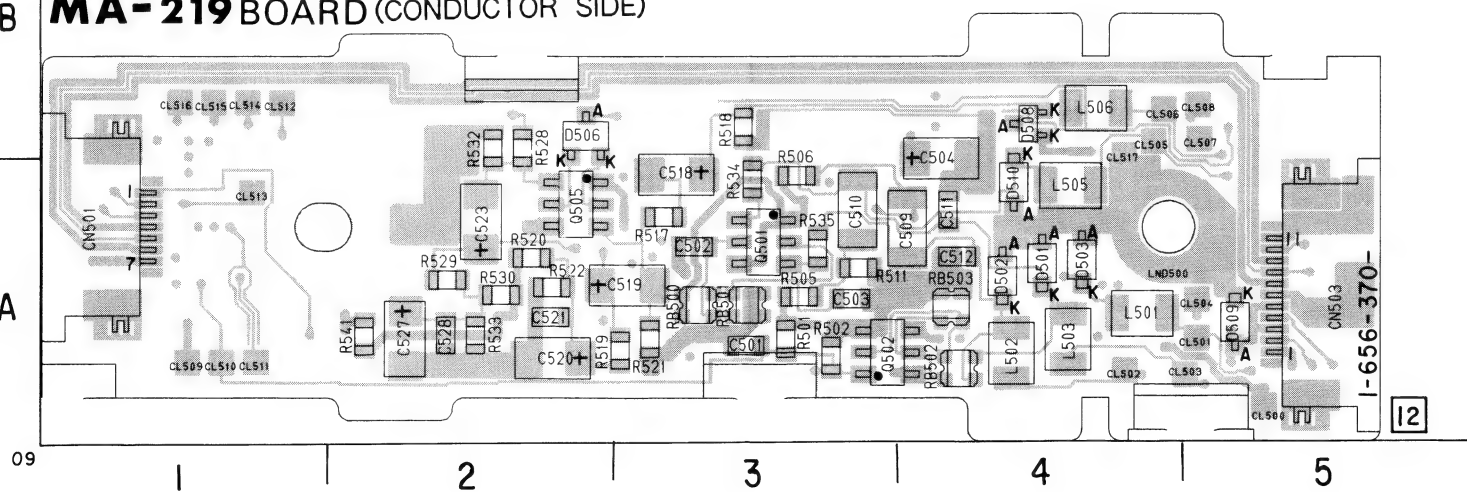
FP-213 BOARD



MA-219 BOARD (COMPONENT SIDE)



MA-219 BOARD (CONDUCTOR SIDE)



MA-219 BOARD

C500	C-3	RB501	A-3
C501	A-3	RB502	A-4
C502	A-3	RB503	A-4
C503	A-3		
C504	B-4		
C505	C-4		
C506	C-3		
C507	C-3		
C508	C-4		
C509	A-4		
C510	A-3		
C511	A-4		
C512	A-4		
C513	C-3		
C514	C-4		
C515	C-3		
C516	C-3		
C517	C-4		
C518	A-3		
C519	A-3		
C520	A-2		
C521	A-2		
C522	C-4		
C523	A-2		
C524	C-2		
C525	C-2		
C526	C-2		
C527	A-2		
C528	A-2		
CN501	A-1		
CN502	C-5		
CN503	A-5		
D500	C-4		
D501	A-4		
D502	A-4		
D503	A-4		
D504	C-4		
D505	C-2		
D506	B-2		
D507	C-4		
D508	B-4		
D509	A-5		
D510	A-4		
D511	B-4		
FB501	C-4		
IC500	C-3		
IC501	C-2		
L500	C-4		
L501	A-4		
L502	A-4		
L503	A-4		
L505	A-4		
L506	B-4		
L507	C-4		
L508	C-4		
L509	C-1		
Q500	C-3		
Q501	A-3		
Q502	A-3		
Q503	C-3		
Q504	C-2		
Q505	A-2		
Q506	C-2		
Q507	C-2		
Q508	C-4		
R500	C-3		
R501	A-3		
R502	A-3		
R503	B-3		
R504	B-3		
R505	A-3		
R506	A-3		
R507	C-3		
R508	C-5		
R509	C-4		
R510	C-4		
R511	A-3		
R512	C-4		
R513	C-3		
R515	C-4		
R516	C-3		
R517	A-3		
R518	B-3		
R519	A-3		
R520	A-2		
R521	A-3		
R522	A-2		
R523	C-1		
R524	C-2		
R525	C-2		
R526	C-1		
R527	C-2		
R528	B-2		
R529	A-2		
R530	A-2		
R531	C-4		
R532	B-2		
R533	A-2		
R534	A-3		
R535	A-3		
R536	C-4		
R538	C-3		
R540	C-3		
RB500	A-3		

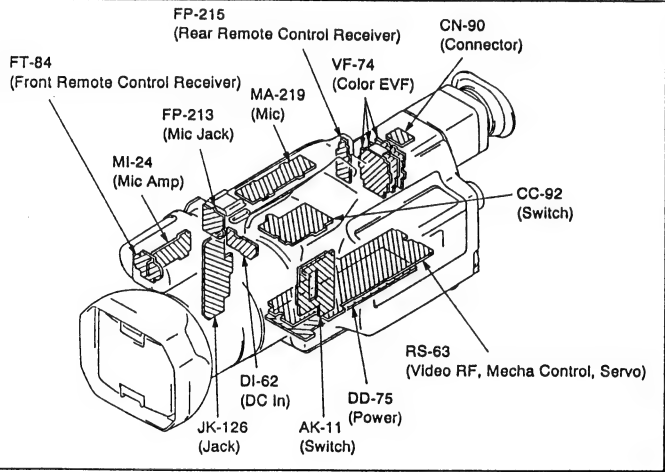
MA-219 (MIC),
 — Ref. No. MA-219,

1	
A	
B	
C	
D	
E	

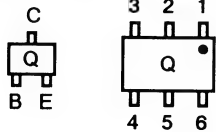
FP-

J002
 MIC
 (PLUG IN
 POWER)

09



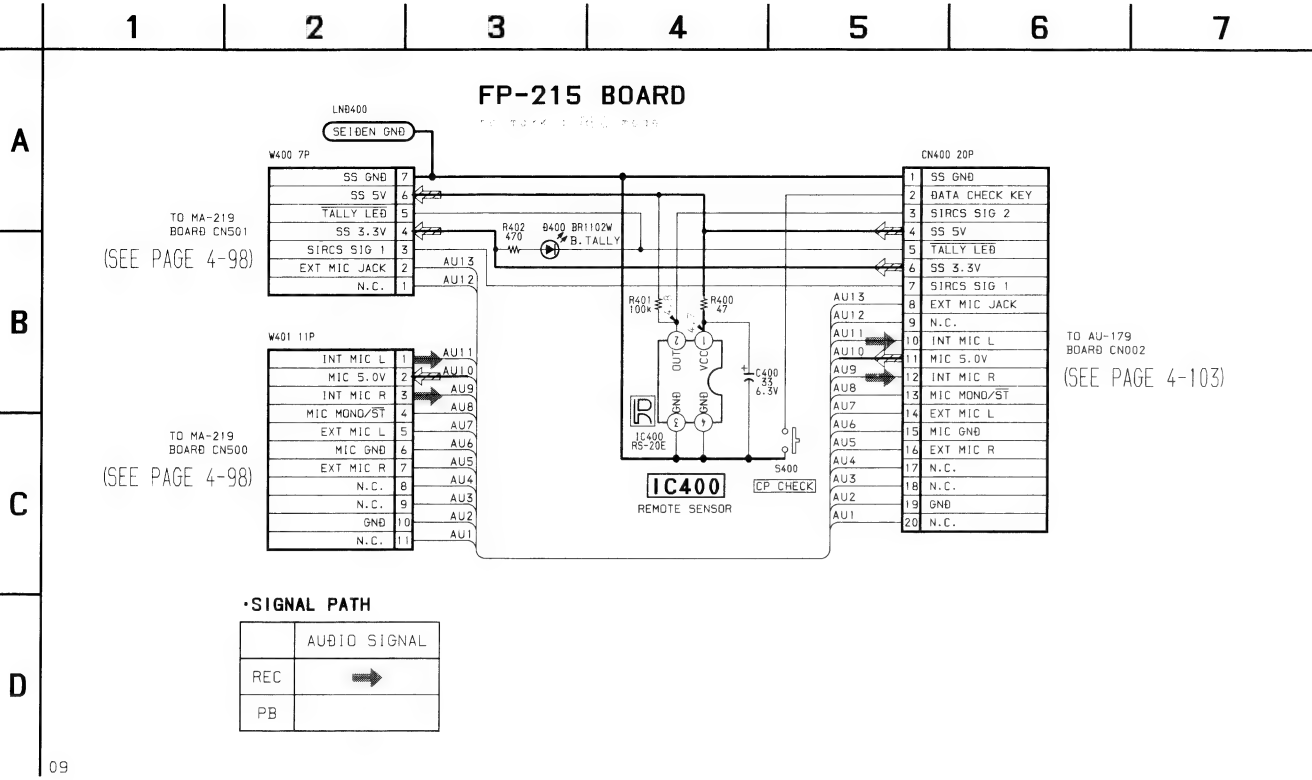
- For printed wiring boards.
- This board is four-layer print board. However, the patterns of layers 2 to 3 have not been included in the diagram.
- Chip transistor





FP-215 (REAR REMOTE CONTROL RECEIVER) SCHEMATIC DIAGRAM

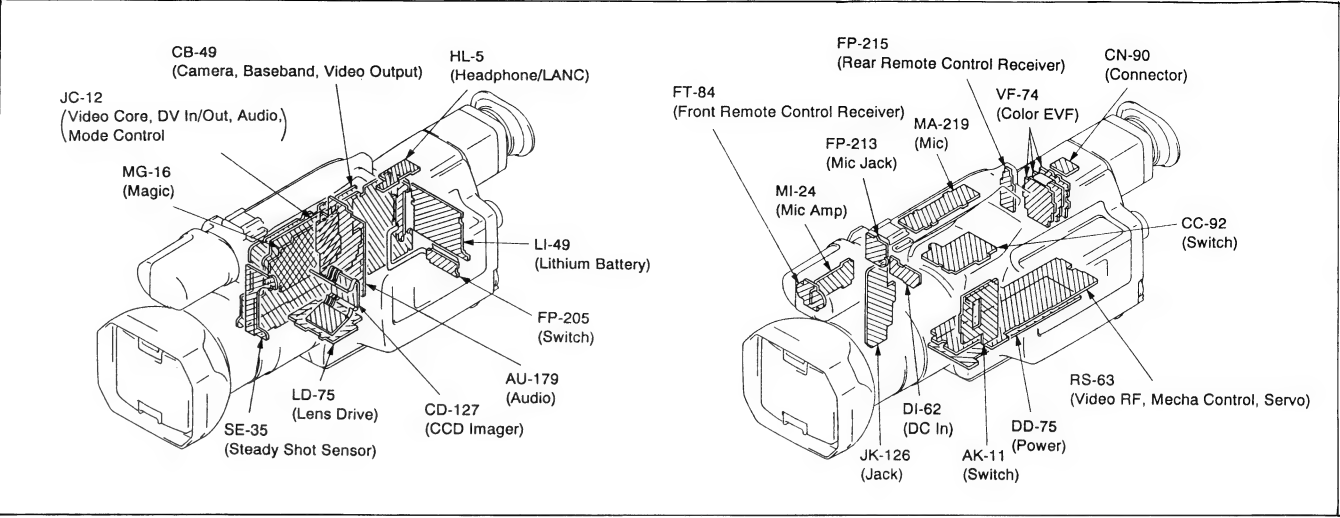
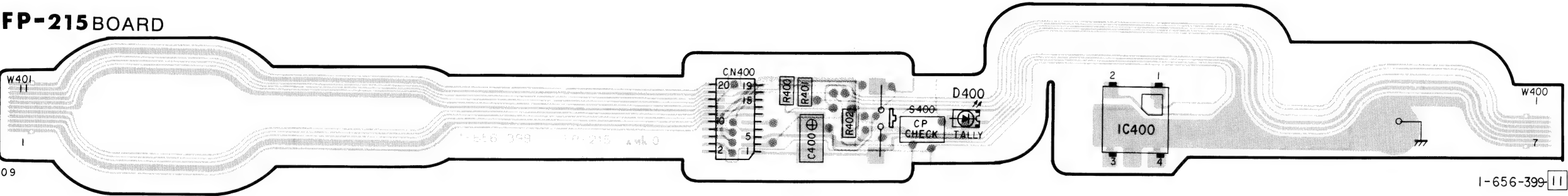
— Ref. No. FP-215 BOARD: 6000 series —



FP-215 (REAR REMOTE CONTROL RECEIVER) PRINTED WIRING BOARD

— Ref. No. FP-215 BOARD: 6000 series —

FP-215 BOARD



C001	D-1
C002	B-2
C003	B-2
C004	D-2
C007	C-6
C008	B-6
C009	B-6
C010	B-2
C011	B-7
C012	A-6
C013	B-6
C014	B-6
C015	C-6
C016	B-7
C017	B-2
C018	C-6
C019	D-1
C020	A-6
C021	B-2
C022	B-1
C023	B-1
C025	B-1
C026	B-7
C027	D-2
C028	C-7
C029	E-2
C030	B-1
C031	B-1
C032	B-1
C033	B-1
C034	D-1
C035	D-1
C036	C-7
C037	A-7
C038	A-7
C040	B-7
C041	B-7
C042	C-7
C047	C-7
C048	C-7
C049	C-7
C050	B-7
C051	C-7
C052	C-7
C053	B-5
C054	B-5
C055	A-6
C056	A-6
C058	E-6
C059	D-6
C060	D-3
C061	D-5
C062	C-6
C063	C-7
C064	D-6
C065	D-6
C066	A-3
C068	D-7
C069	D-7
C070	D-7
C071	D-6
C072	C-6
C073	D-7
C074	C-7
C075	D-7
C076	D-7
C077	D-7
C078	C-6
C079	A-3
C080	E-7
C081	E-7
C082	E-1
C083	E-1
C084	E-7
C085	E-7
C086	E-7
C087	D-7
C088	D-7
C089	E-1
C090	E-7
C091	C-2
C092	C-1
C101	D-2
C102	B-3
C103	C-3
C104	D-2
C110	B-3
C117	B-3
C119	D-2
C121	B-3
C122	B-2
C123	B-3
C125	B-2
C127	D-3
C130	B-2
C131	C-2
C132	B-2
C133	B-2
C134	D-2
C135	D-2
C136	C-6
C150	E-2
C151	E-6
C152	E-6
C153	F-6
C154	E-6
C155	E-2
C157	E-2
C158	A-7
C191	C-3
C192	C-2

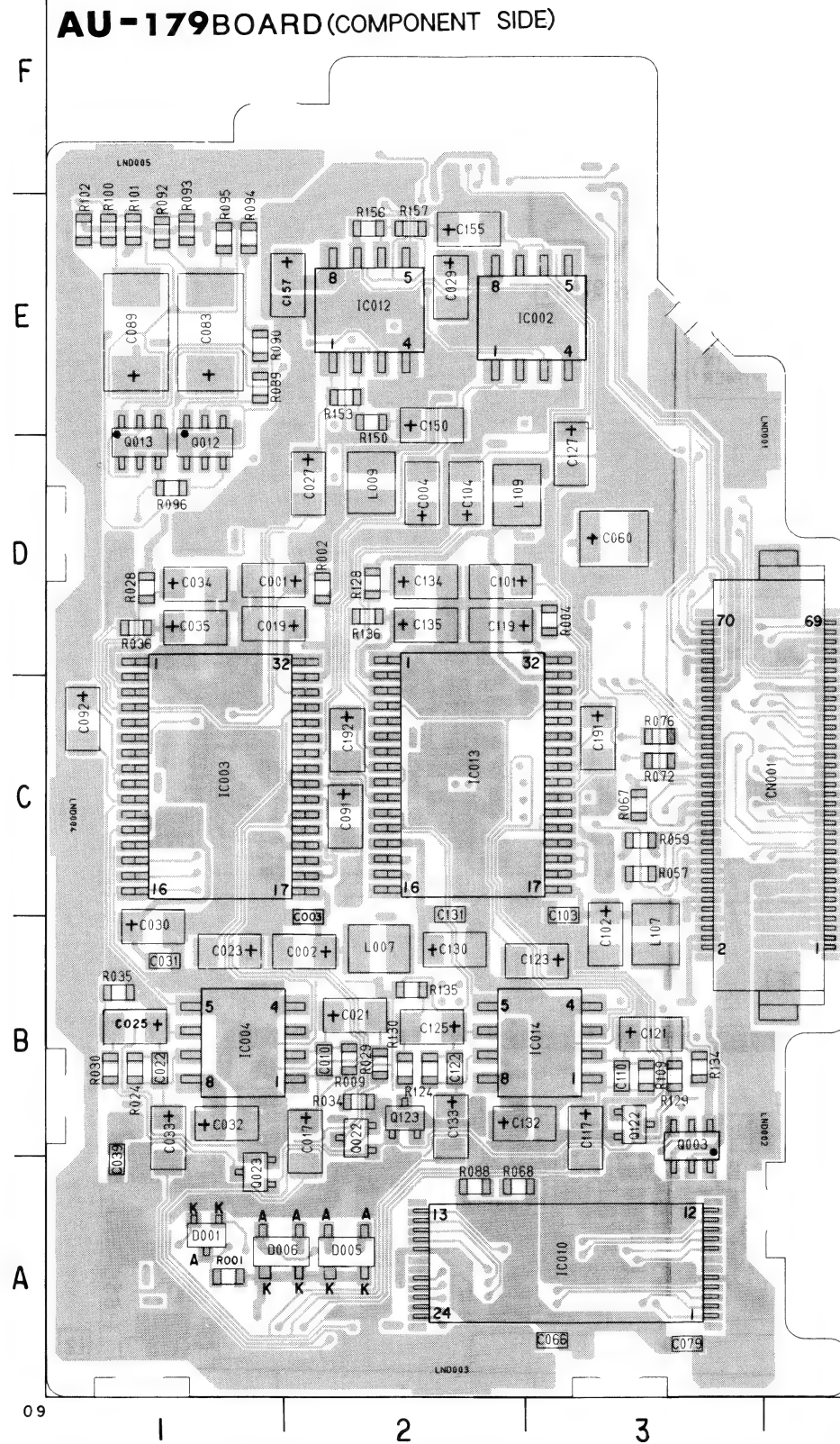
AU-179 BOARD

C001	D-1
C002	B-2
C003	D-2
C004	D-2
C007	C-6
C008	B-6
C009	B-6
C010	B-2
C011	B-7
C012	A-6
C013	B-6
C014	B-6
C015	C-6
C016	B-7
C017	B-2
C018	C-6
C019	D-1
C020	A-6
C021	B-2
C022	B-1
C023	B-1
C025	B-1
C026	B-7
C027	D-2
C028	C-7
C029	E-2
C030	B-1
C031	B-1
C032	B-1
C033	B-1
C034	D-1
C035	D-1
C036	C-7
C037	A-7
C038	A-7
C040	B-7
C041	B-7
C042	C-7
C047	C-7
C048	C-7
C049	C-7
C050	B-7
C051	C-7
C052	C-7
C053	B-5
C054	B-5
C055	A-6
C056	A-6
C058	E-6
C059	D-6
C060	D-3
C061	D-5
C062	C-6
C063	C-7
C064	D-6
C065	D-6
C066	A-3
C068	D-7
C069	D-7
C070	D-7
C071	D-6
C072	C-6
C073	D-7
C074	C-7
C075	D-7
C076	D-7
C077	D-7
C078	C-6
C079	A-3
C080	E-7
C081	E-7
C082	E-7
C083	E-1
C084	E-7
C085	E-7
C086	E-7
C087	E-7
C088	D-7
C089	E-1
C090	E-1
C091	C-2
C092	C-1
C101	D-2
C102	B-3
C103	C-3
C104	D-2
C110	B-3
C117	B-3
C119	B-3
C121	B-3
C122	B-3
C123	B-3
C124	B-3
C125	B-3
C126	B-3
C127	B-3
C128	B-3
C129	B-3
C130	B-3
C131	B-3
C132	B-3
C133	B-3
C134	B-3
C135	B-3
C136	B-3
C137	B-3
C138	B-3
C139	B-3
C140	B-3
C141	B-3
C142	B-3
C143	B-3
C144	B-3
C145	B-3
C146	B-3
C147	B-3
C148	B-3
C149	B-3
C150	B-3
C151	B-3
C152	B-3
C153	B-3
C154	B-3
C155	B-3
C156	B-3
C157	B-3
C158	B-3
C159	B-3
C160	B-3
C161	B-3
C162	B-3
C163	B-3
C164	B-3
C165	B-3
C166	B-3
C167	B-3
C168	B-3
C169	B-3
C170	B-3
C171	B-3
C172	B-3
C173	B-3
C174	B-3
C175	B-3
C176	B-3
C177	B-3
C178	B-3
C179	B-3
C180	B-3
C181	B-3
C182	B-3
C183	B-3
C184	B-3
C185	B-3
C186	B-3
C187	B-3
C188	B-3
C189	B-3
C190	B-3
C191	B-3
C192	B-3

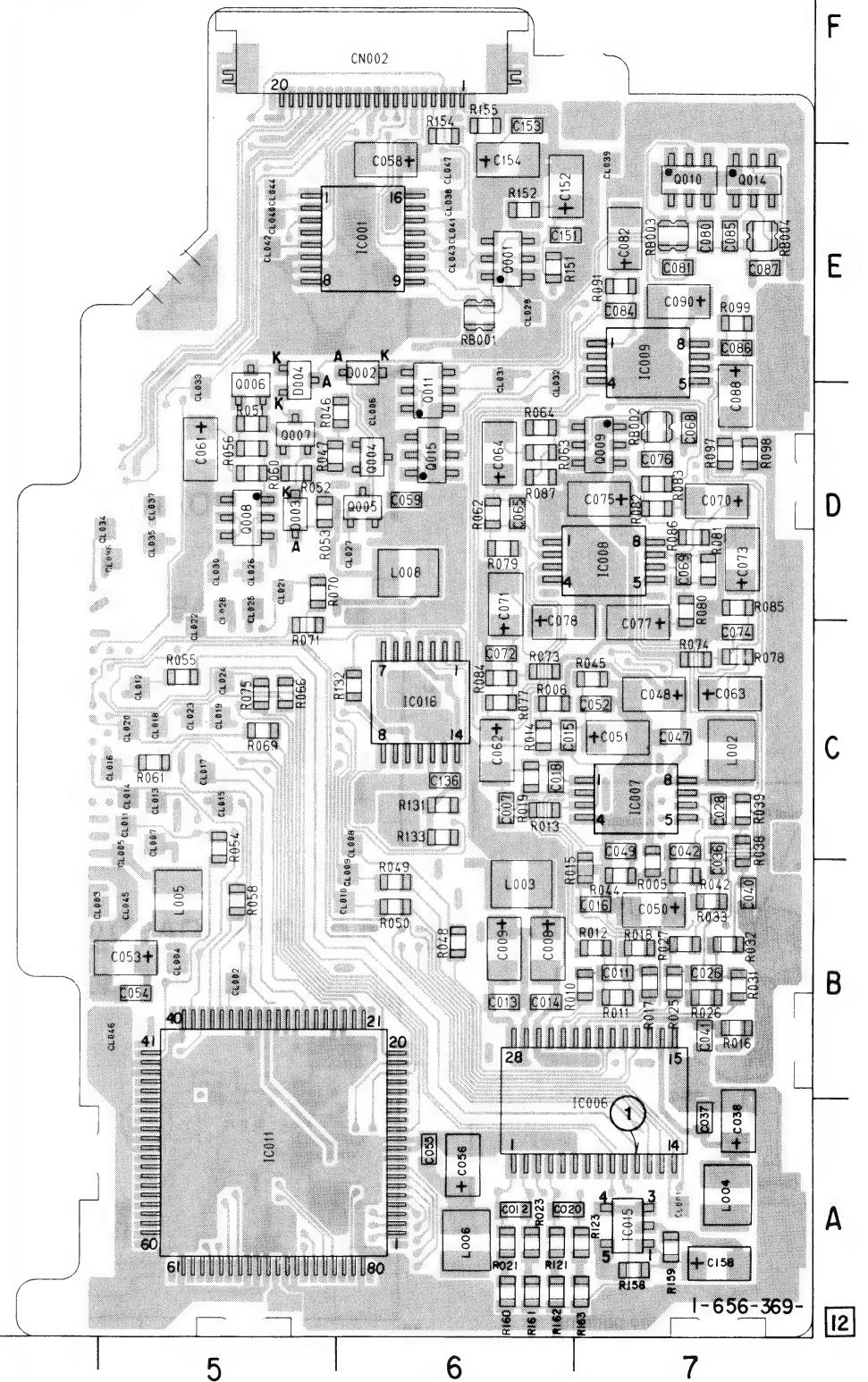
CN001	C-4
CN002	F-6
D001	A-1
D002	E-6
D003	D-5
D004	E-5
D005	A-2
D006	A-1
IC001	E-6
IC002	E-3
IC003	C-1
IC004	B-1
IC006	A-7
IC007	C-7
IC008	D-7
IC009	E-7
IC010	A-3
IC011	A-5
IC012	E-2
IC013	C-2
IC014	B-3
IC015	A-7
IC016	C-6
L002	C-7
L003	B-6
L004	A-7
L005	B-5
L006	A-6
L007	B-2
L008	D-6
L009	D-2
L107	B-3
L109	D-2
Q001	E-6
Q003	B-3
Q004	D-6
Q005	D-6
Q006	D-5
Q007	D-5
Q008	D-5
Q009	D-7
Q010	E-7
Q011	D-6
Q012	D-1
Q013	D-1
Q014	E-7
Q015	D-6
Q022	B-2
Q023	A-1
Q122	B-3
Q123	B-2
R001	A-1
R002	D-2
R004	D-3
R005	B-7
R006	C-6
R009	B-2
R010	B-7
R011	B-7
R012	B-7
R013	C-6
R014	C-6
R015	B-7
R016	B-7
R017	B-7
R018	B-7
R019	C-6
R021	A-6
R023	A-6
R024	B-1
R025	B-7
R026	B-7
R027	B-7
R028	D-1
R029	B-2
R030	B-1
R031	B-7
R032	B-7
R033	B-7
R034	B-2
R035	B-1
R036	D-1
R038	C-7
R039	C-7
R042	B-7
R044	B-7
R045	C-7
R046	D-6
R047	D-5
R048	B-6
R049	B-6
R050	B-6
R051	D-5
R052	D-5
R053	D-5
R054	C-5
R055	C-5
R056	C-5
R057	C-5
R058	C-5
R059	C-5
R060	C-5
R061	C-5
R062	C-5
R063	C-5
R064	C-5
R065	C-5
R066	C-5

R067	C-3
R068	A-2
R069	C-5
R070	D-5
R071	C-5
R072	C-3
R073	C-3
R074	C-3
R075	C-3
R076	C-3
R077	C-3
R078	C-3
R079	D-7
R080	D-7
R081	D-7
R082	D-7
R083	D-7
R084	C-6
R085	D-7
R086	D-7
R087	D-6
R088	A-2
R089	E-1
R090	E-1
R091	E-1
R092	E-1
R093	E-1
R094	E-1
R095	E-1
R096	D-1
R097	D-7
R098	D-7
R099	E-1
R100	E-1
R101	E-1
R102	E-1
R109	B-3
R121	A-6
R123	A-7
R124	B-2
R128	D-2
R129	B-3
R130	B-2
R131	C-6
R132	C-6
R133	C-6
R134	B-3
R135	B-2
R136	E-2
R150	E-2
R151	E-6
R152	E-6
R153	E-2
R154	F-6
R155	F-6
R156	E-2
R157	E-2
R158	A-7
R159	A-7
R160	A-6
R161	A-6
R162	A-6
R163	A-7
RB001	E-6
RB002	D-7
RB003	E-7
RB004	E-7

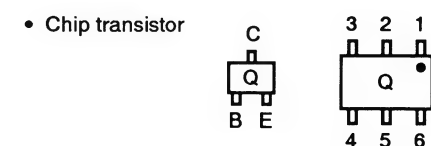
AU-179 (AUDIO) PRINTED WIRING BOARD — Ref. No. AU-179 BOARD: 7000 series —



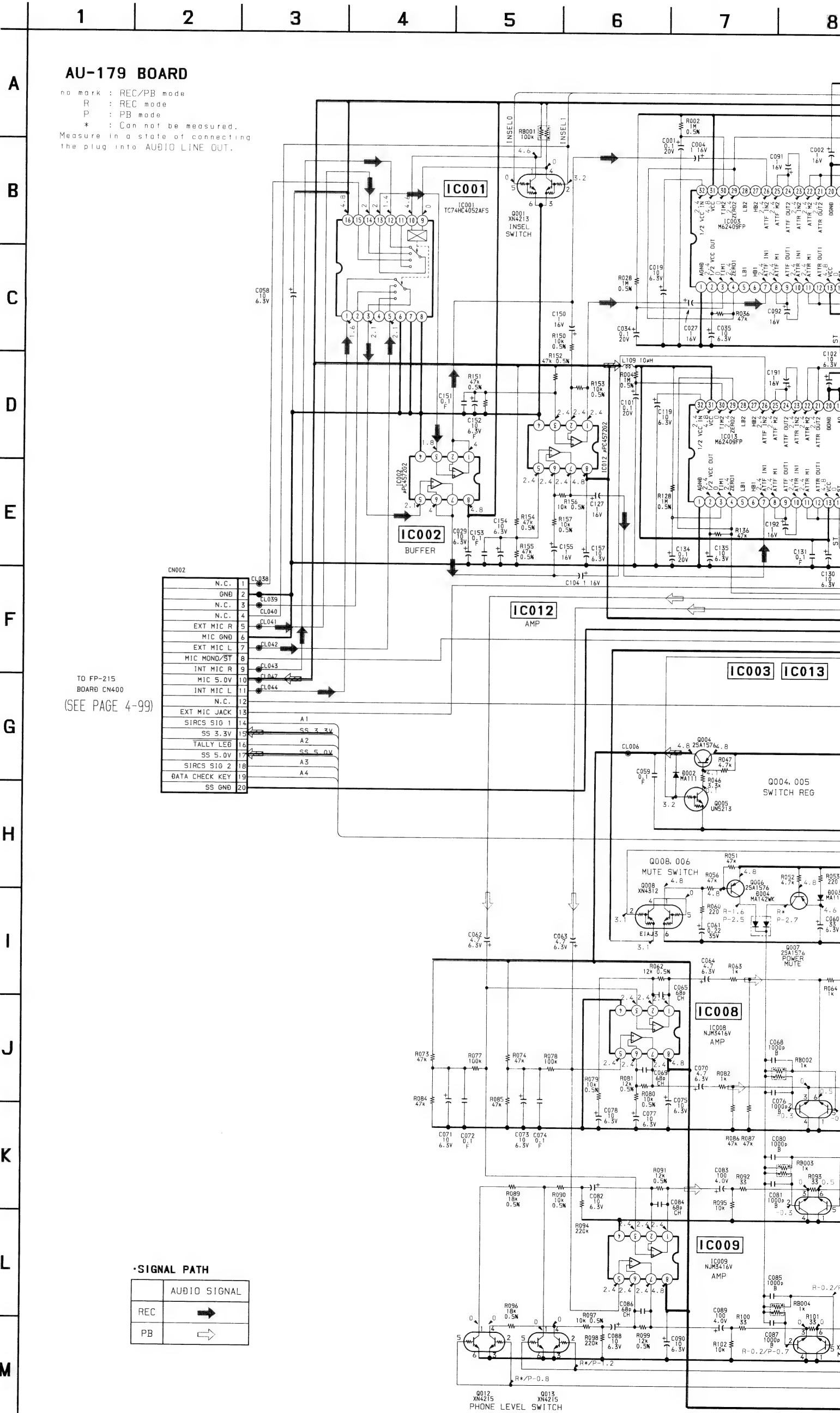
AU-179 BOARD (CONDUCTOR SIDE)



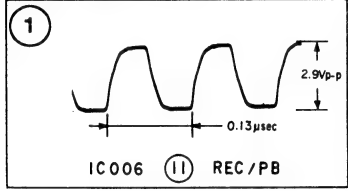
- For printed wiring boards.
- This board is four-layer print board. However, the patterns of layers 2 to 3 have not been included in the diagram.



AU-179 (AUDIO) SCHEMATIC DIAGRAM
— Ref. No. AU-179 BOARD: 7000 series —



AU-179 BOARD



6

7

8

9

10

11

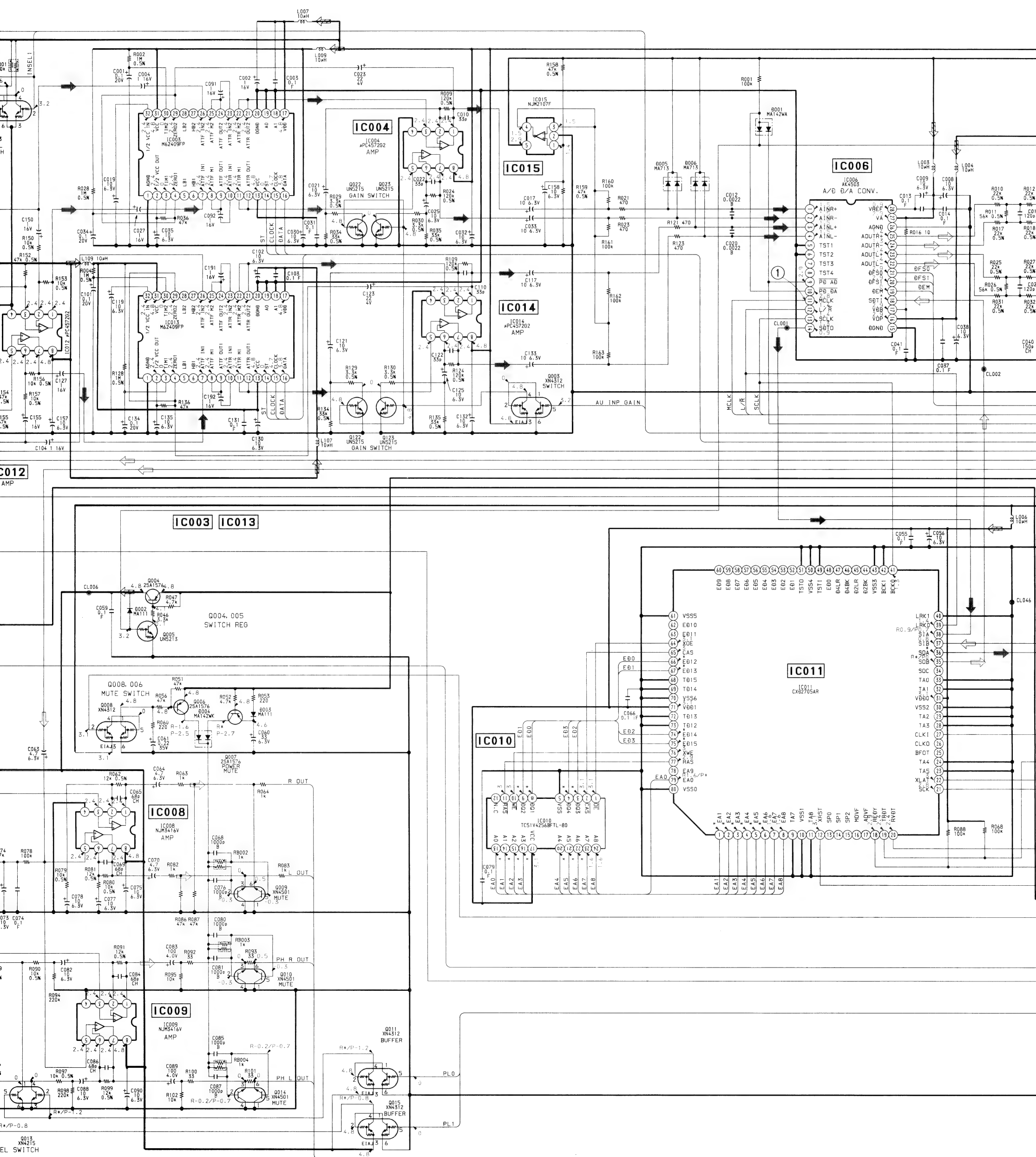
12

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16



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16

17

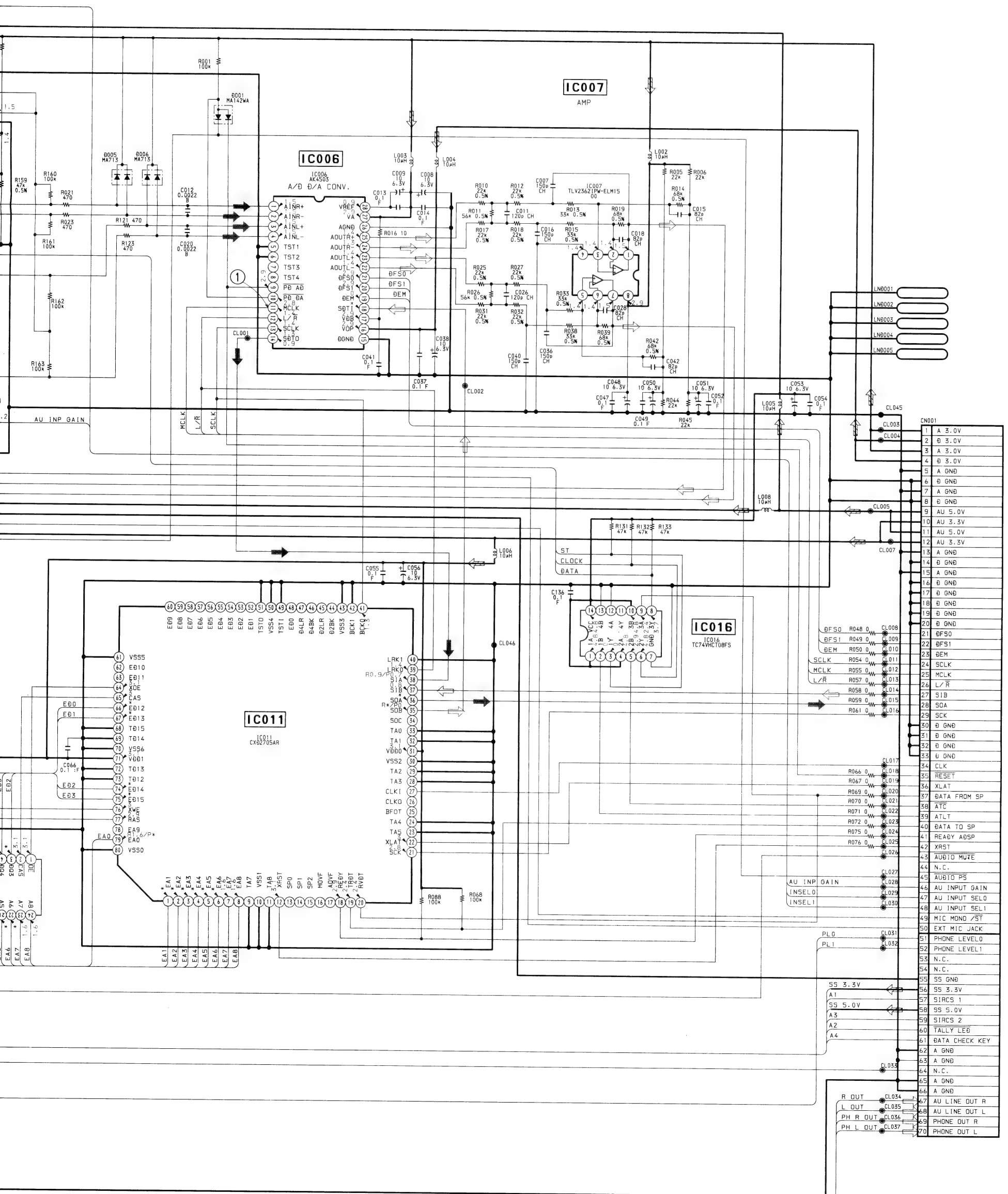
18

19

20

21

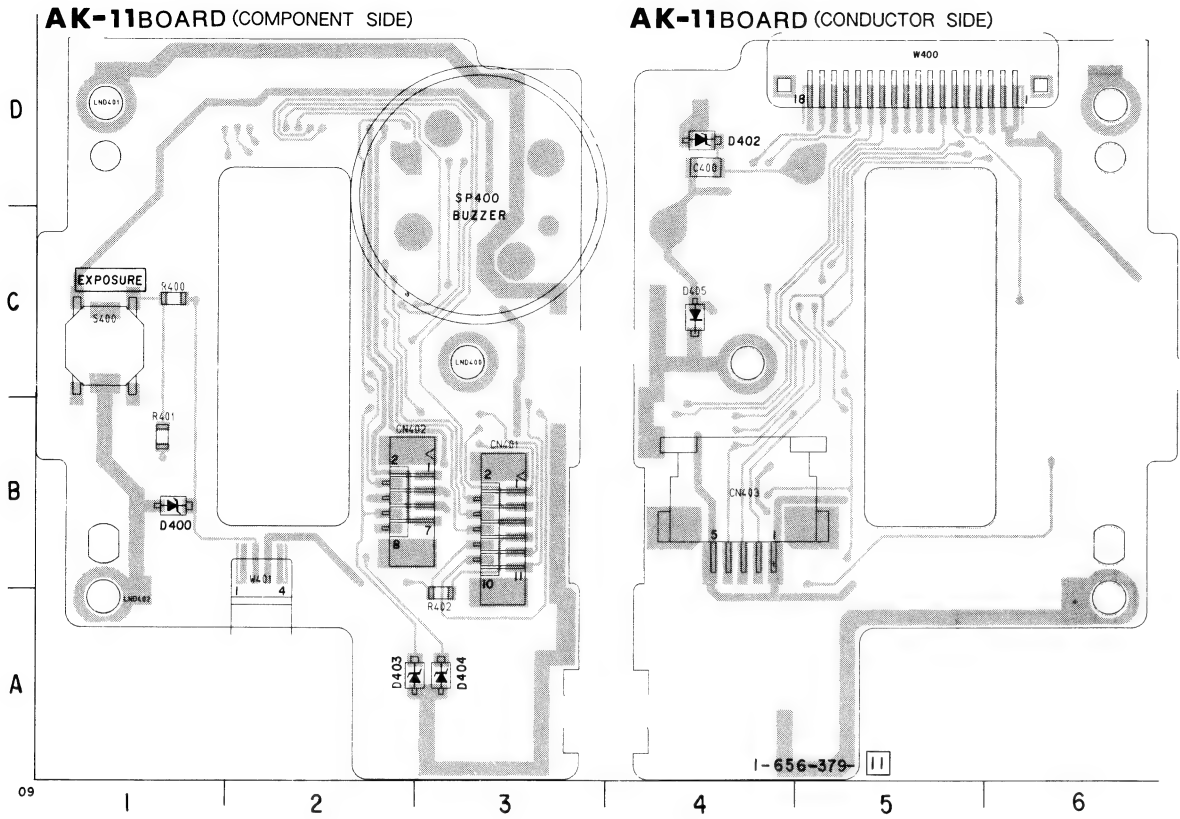
22



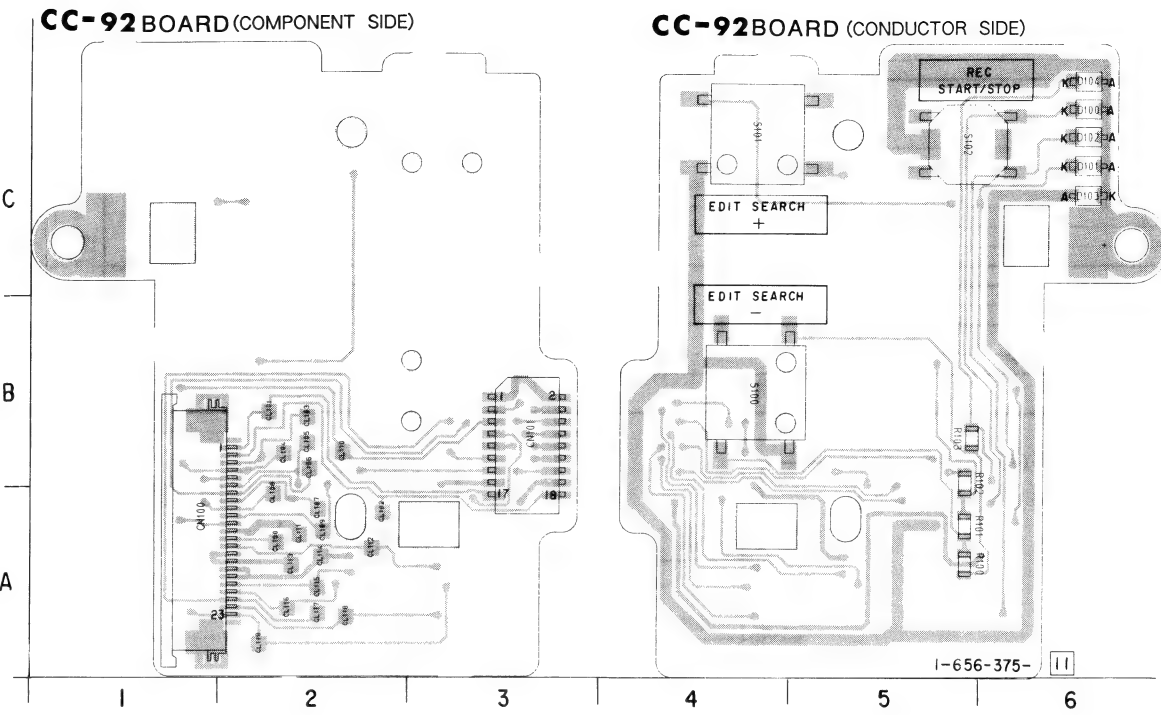
TO JC-12
BOARD (5/7)
CN641
(SEE PAGE 4-63)

AK-11 (SWITCH), CC-92 (SWITCH) PRINTED WIRING BOARDS

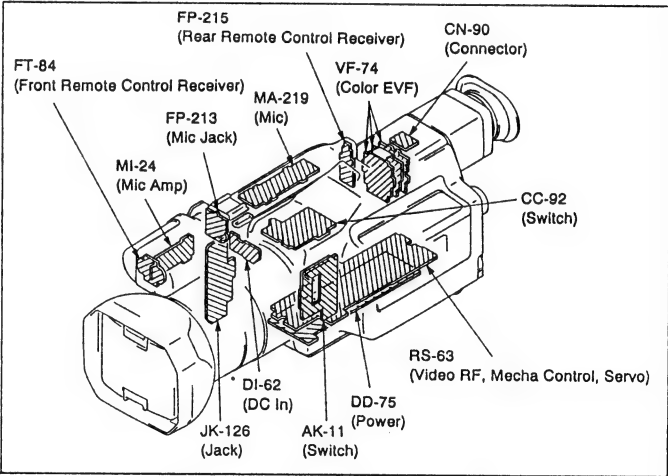
— Ref. No. AK-11, CC-92 BOARDS: 8000 series —



There are few cases that the part isn't mounted in this model is printed on this diagram.

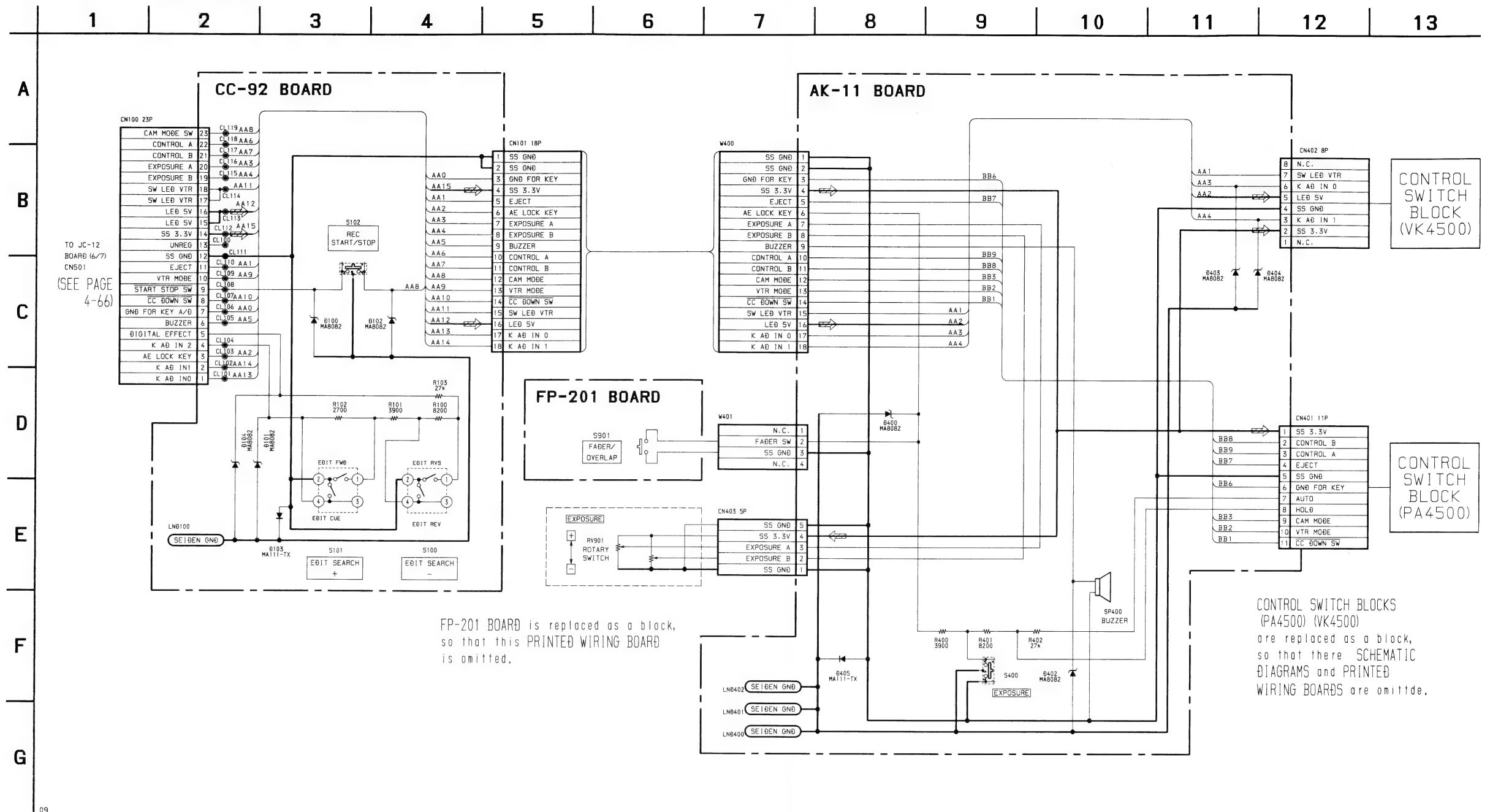


AK-11 BOARD		CC-92 BOARD	
CN401	B-3	CN100	A-1
CN402	B-2	CN101	B-3
CN403	B-4		
D400	B-1	D100	C-6
D402	D-4	D101	C-6
D403	A-2	D102	C-6
D404	A-3	D103	C-6
D405	C-4	D104	D-6
R400	C-1	R100	A-5
R401	B-1	R101	A-5
R402	A-3	R102	B-5
		R103	B-5
S400	C-1	S100	B-4
SP400	D-3	S101	C-4
W400	D-5	S102	C-5
W401	B-2		



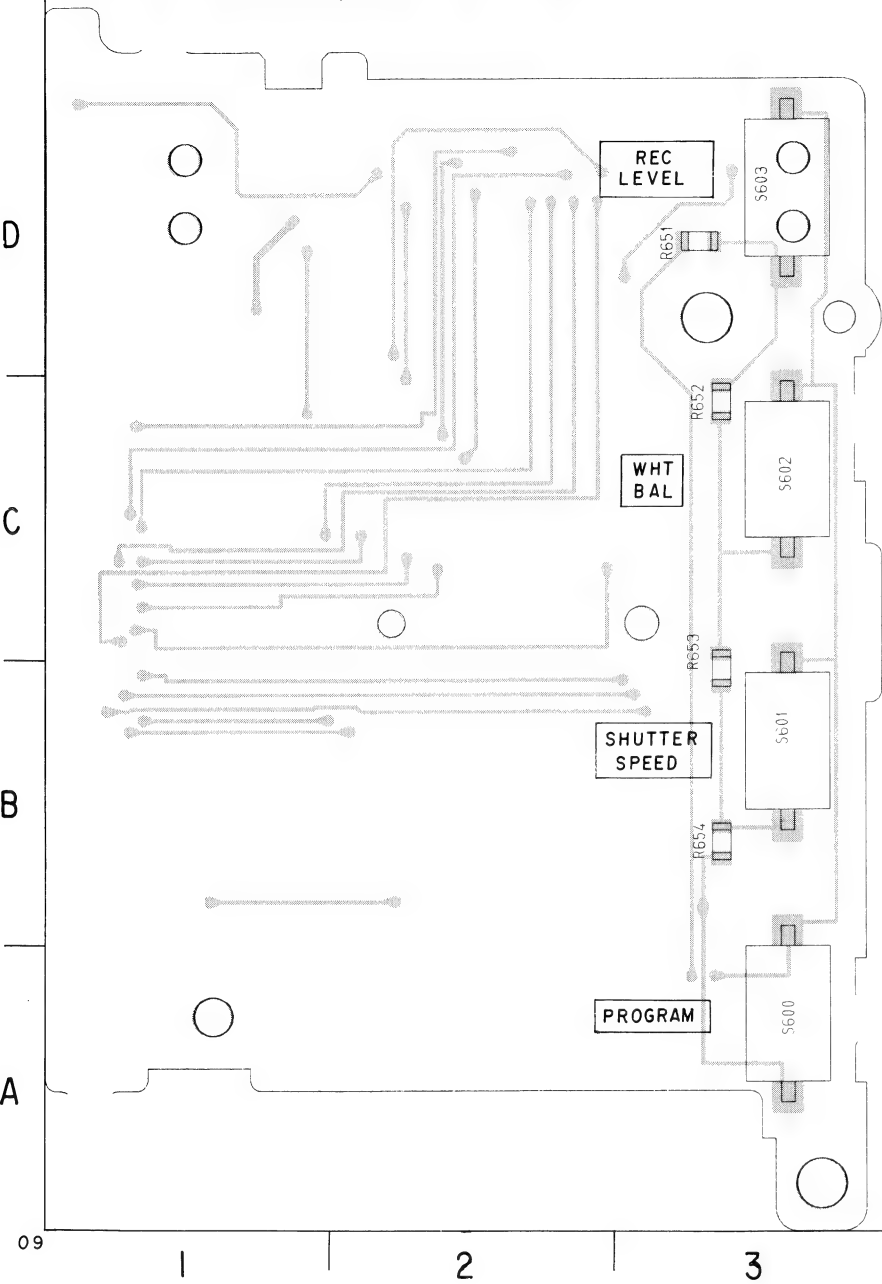
AK-11 (SWITCH), CC-92 (SWITCH) SCHEMATIC DIAGRAMS

— Ref. No. AK-11, CC-92 BOARDS: 8000 series —

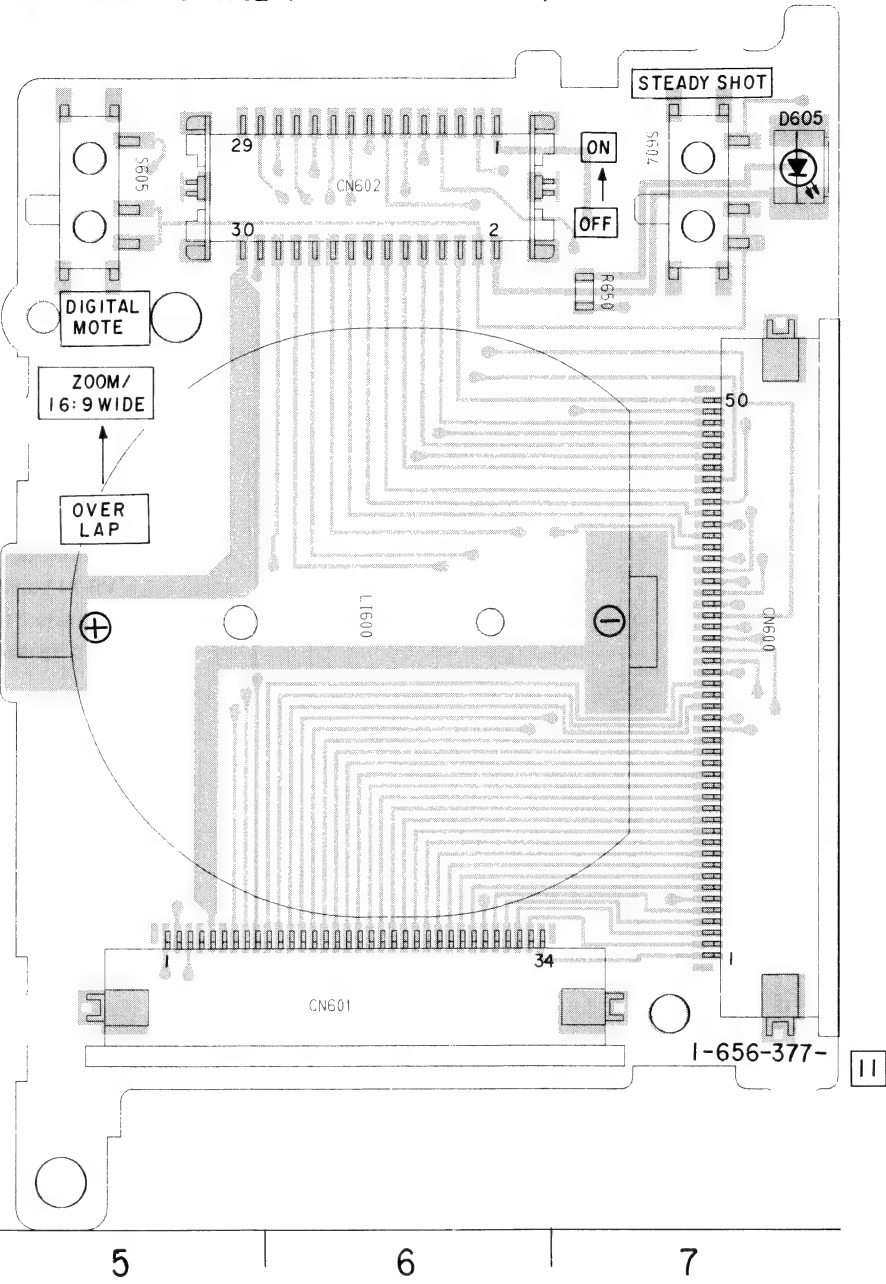


There are few cases that the part isn't mounted in this model is printed on this diagram.

LI-49 BOARD (COMPONENT SIDE)

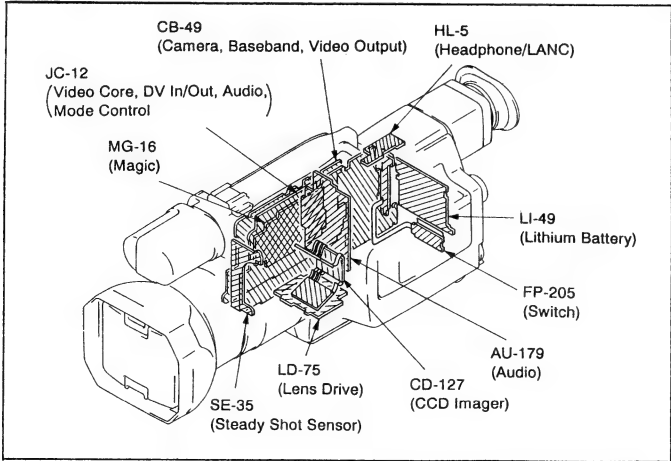


LI-49 BOARD (CONDUCTOR SIDE)



LI-49 BOARD

CN600	C-7
CN601	A-6
CN602	D-6
D605	D-7
LI600	C-6
R650	D-7
R651	D-3
R652	B-3
R653	B-3
R654	B-3
S600	A-3
S601	B-3
S602	C-3
S603	D-3
S604	D-7
S605	D-5



A

B

C

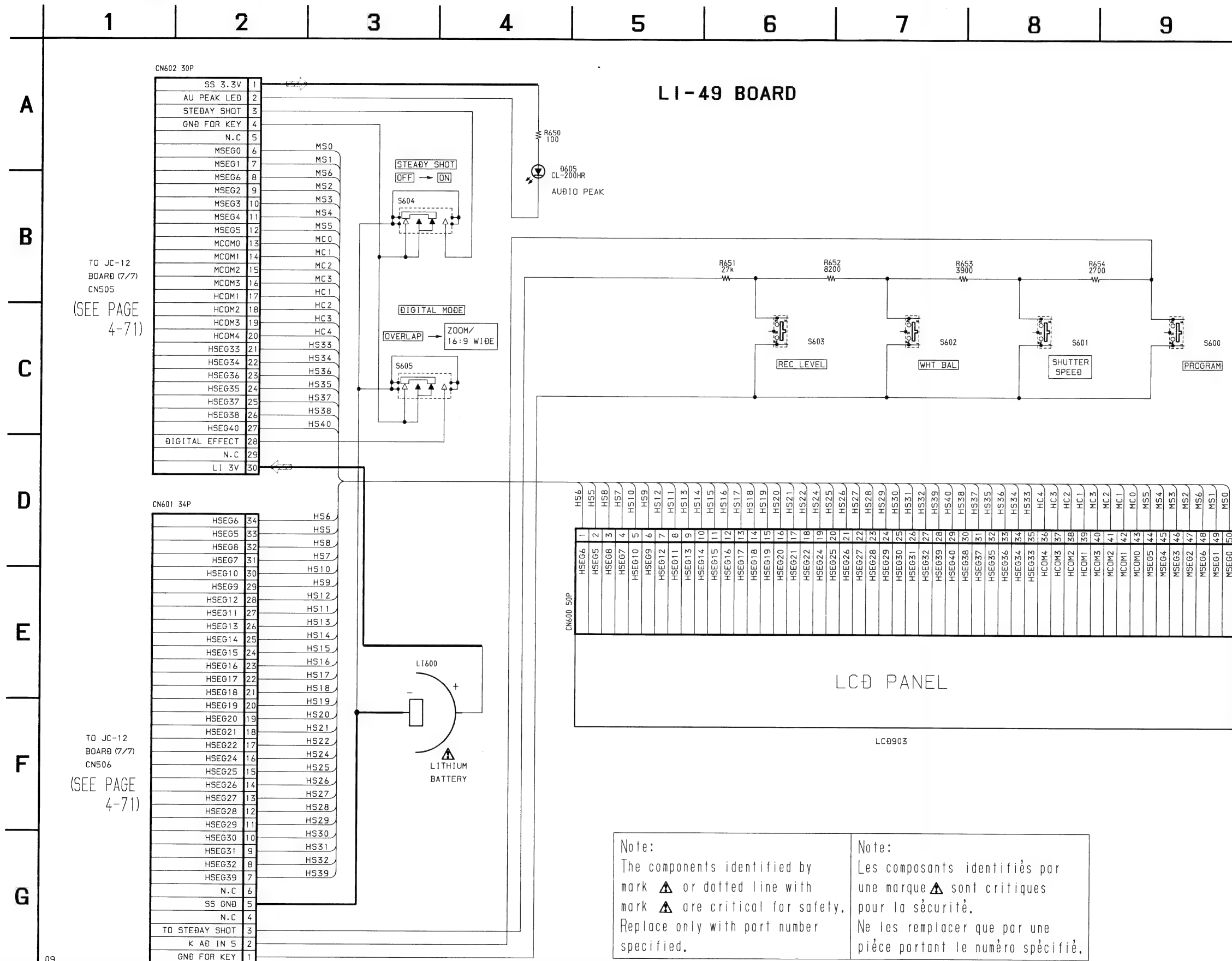
D

E

F

G

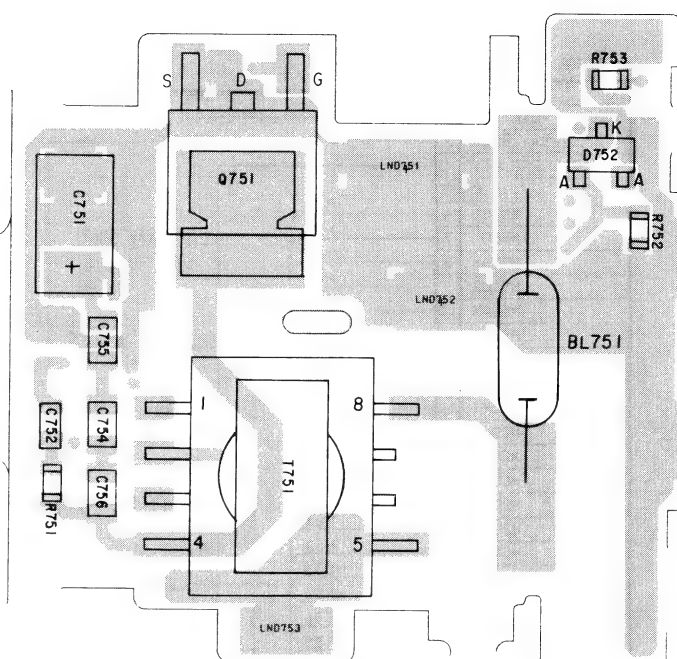
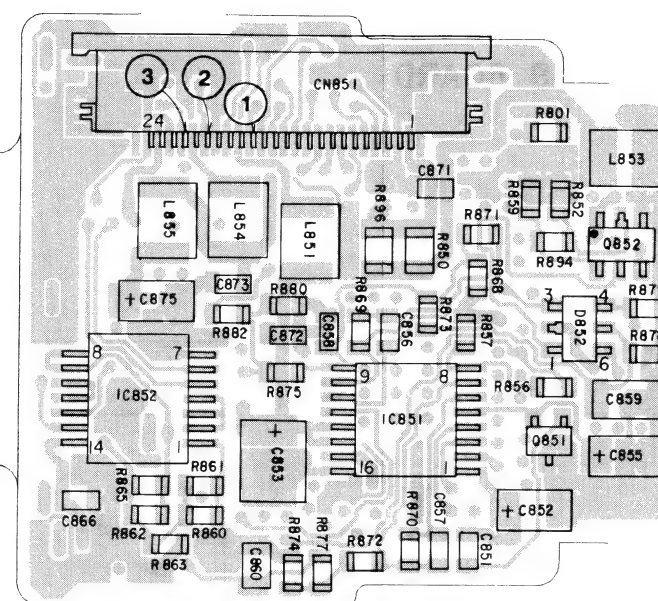
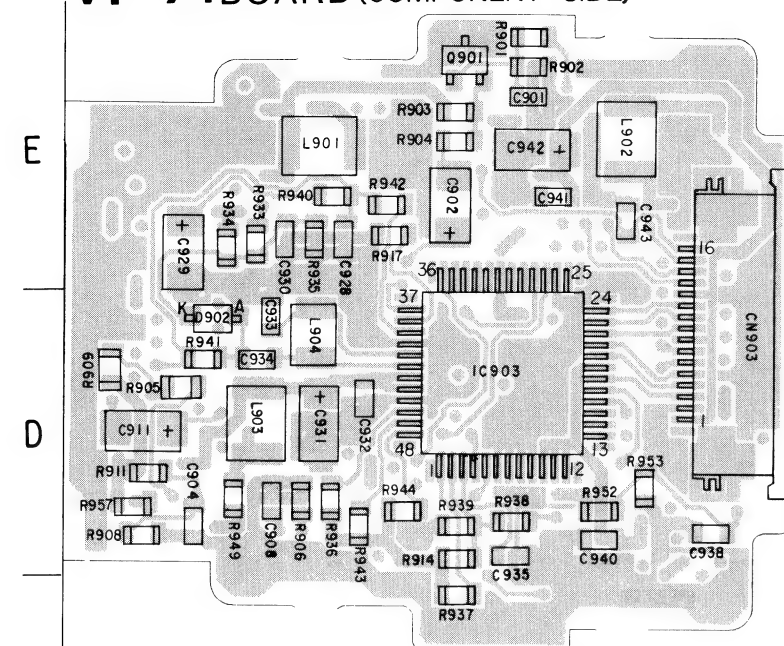
— Ref. No. LI-49 BOARD: 8000 series —



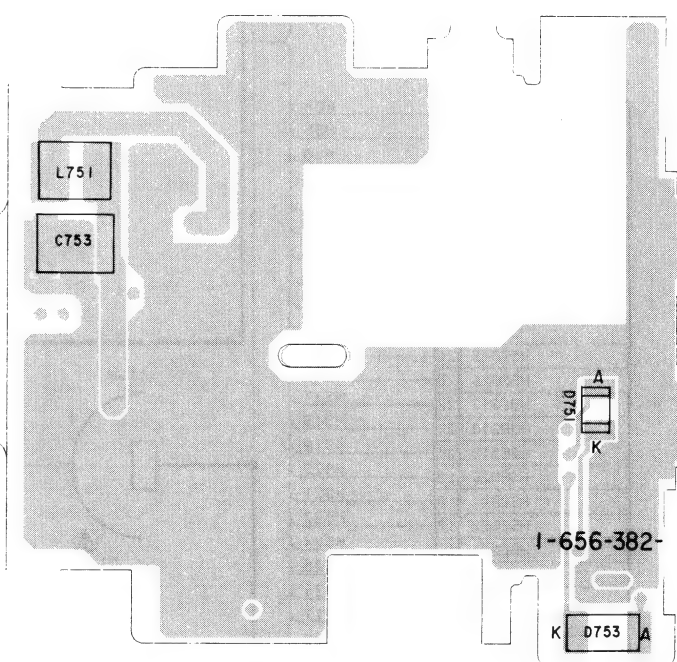
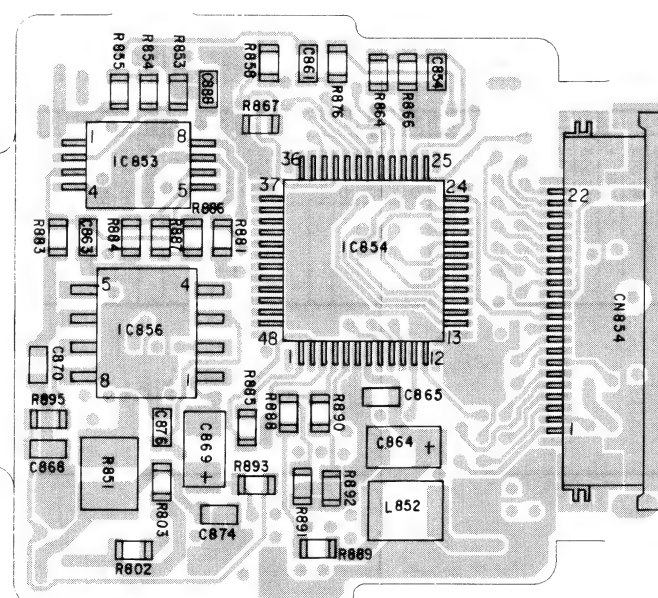
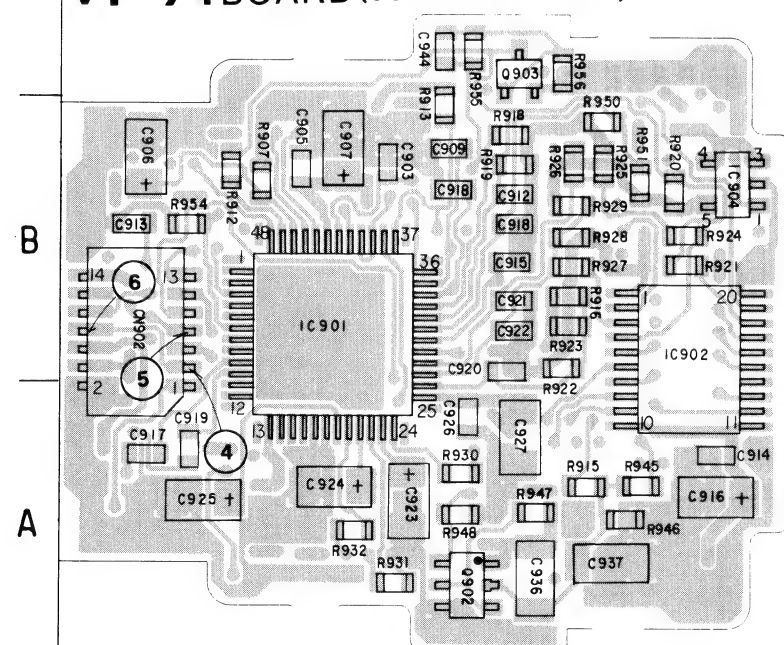
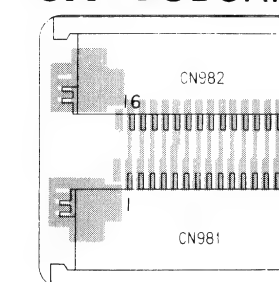
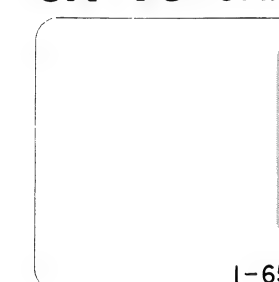
VF-74 (COLOR EVF), CN-90 (CONNECTOR) PRINTED WIRING BOARDS

— Ref. No. VF-74 BOARD: 8000 series, CN-90 BOARD: 9000 series —

VF-74 BOARD (COMPONENT SIDE)



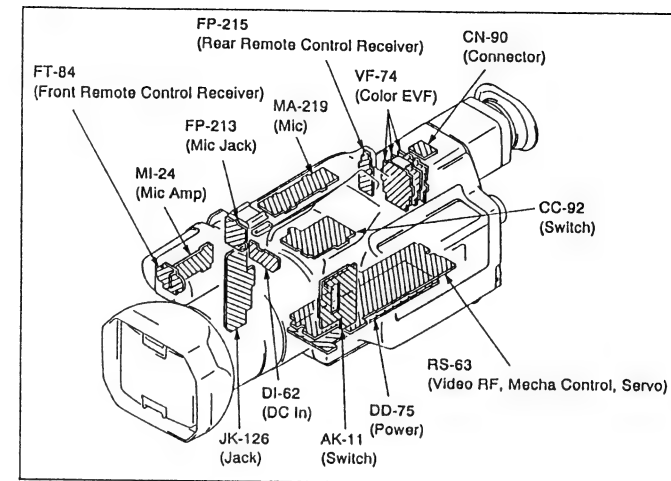
VF-74 BOARD (CONDUCTOR SIDE)

**CN-90BOARD****CN-90BOAF**

C751	E-7	R853	B-4
C752	D-7	R854	B-4
C753	B-7	R855	B-4
C754	D-7	R856	D-6
C755	D-7	R857	D-5
C756	D-7	R858	C-5
C851	C-5	R859	E-6
C852	D-6	R860	D-5
C853	D-5	R861	D-5
C854	C-5	R862	D-4
C855	D-6	R863	D-4
C856	D-5	R864	C-5
C857	C-5	R865	D-4
C858	D-5	R867	B-5
C859	D-6	R868	D-5
C860	C-5	R869	D-5
C861	C-5	R870	C-5
C863	B-4	R871	E-6
C864	A-5	R872	C-5
C865	A-5	R873	D-5
C866	D-4	R874	C-5
C868	A-4	R875	D-5
C869	A-5	R876	C-5
C870	A-4	R877	C-5
C875	D-4	R878	D-6
C876	A-4	R879	D-6
C888	B-5	R881	B-5
C901	E-2	R882	D-5
C902	E-2	R883	B-4
C903	B-2	R884	B-4
C904	D-1	R885	A-5
C905	B-1	R886	B-5
C906	B-1	R887	B-4
C907	B-1	R892	A-5
C908	D-1	R894	E-6
C909	B-2	R895	A-4
C910	B-2	R896	E-5
C911	D-1	R901	E-2
C912	B-2	R902	E-2
C913	B-1	R903	E-2
C914	A-3	R904	E-2
C915	B-2	R906	D-1
C916	A-3	R908	D-1
C917	A-1	R911	D-1
C918	B-2	R913	B-2
C919	A-1	R916	B-2
C920	B-2	R918	B-2
C921	B-2	R919	B-2
C922	B-2	R920	B-3
C923	A-2	R921	B-3
C924	A-1	R922	B-2
C925	A-1	R923	B-2
C926	A-2	R924	B-3
C927	A-2	R925	B-2
C928	E-1	R926	B-2
C929	E-1	R927	B-2
C930	E-1	R928	B-2
C931	D-1	R929	B-2
C932	D-2	R930	A-2
C933	D-1	R931	A-2
C934	D-1	R932	A-2
C935	D-2	R933	E-1
C936	A-2	R934	E-1
C940	D-2	R935	E-1
C941	E-2	R938	D-2
C942	E-2	R939	D-2
C943	E-2	R940	E-1
		R941	D-1
CN851	E-5	R942	E-2
CN854	B-6	R943	D-2
CN902	B-1	R945	A-3
CN903	D-3	R946	A-2
		R947	A-2
D751	A-9	R948	A-2
D752	E-9	R949	D-1
D753	A-9	R950	B-2
D852	D-6	R951	B-3
D902	D-1		
		T751	D-8
IC851	D-5		
IC852	D-4		
IC853	B-4		
IC854	B-5		
IC856	B-4		
IC901	B-1		
IC902	B-3		
IC903	D-2		
L751	B-7		
L851	E-5		
L852	A-5		
L853	E-6		
L854	E-5		
L855	E-4		
L901	E-1		
L902	E-2		
L903	D-1		
L904	D-1		
Q751	E-8		
Q851	D-6		
Q852	E-6		
Q901	E-2		
Q902	A-2		
R751	D-7		
R752	E-9		
R753	E-9		
R801	E-6		
R803	A-4		
R850	E-5		
R851	A-4		

A diagram of a 16-pin connector. The top row of pins is labeled '16' at the left end and '1' at the right end. The bottom row of pins is labeled '1' at the left end and '16' at the right end. The connector is labeled 'CN982' at the top and 'CN981' at the bottom.

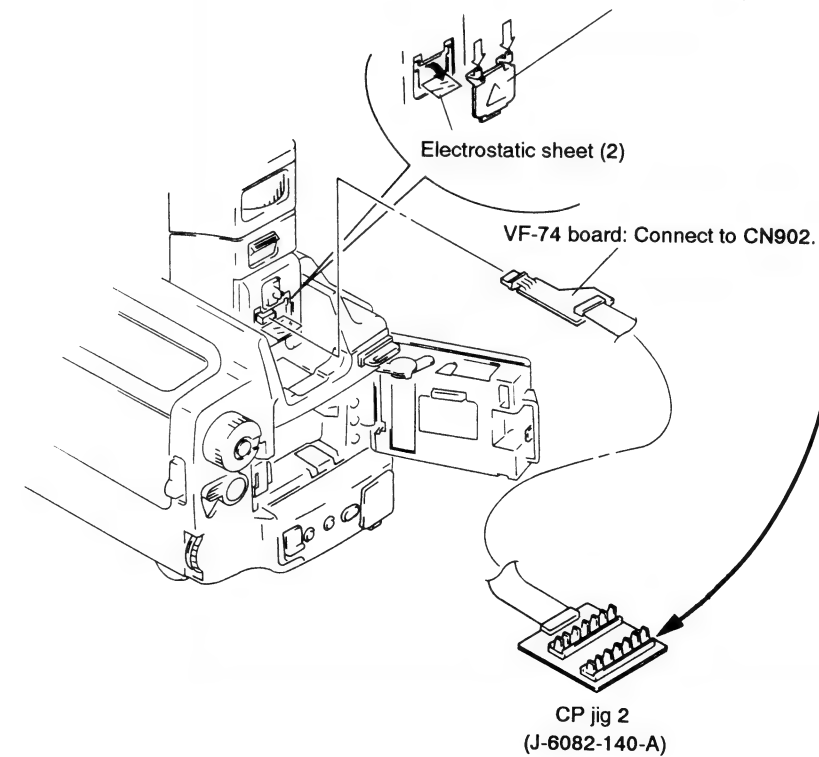
1-656-381-11



-
- The diagram shows two multiplexers. The first is a 2-to-1 multiplexer with inputs B and E, and control input C. The second is a 3-to-1 multiplexer with inputs 4, 5, and 6, and control inputs 3, 2, and 1. Both multiplexers have a single output Q.

There are few cases that the part isn't mounted in this model is printed on this diagram.

Remove the VF adjustment cover pressing two positions of arrows, and open the electrostatic sheet (2).



1

CN851 (15) REC/PB

0.28V_{p-p}

2

CN851 (19) REC/PB

0.38V_{p-p}

3

CN851 (21) REC/PB

0.38V_{p-p}

4

CN902 (3) REC/PB

8.8V_{p-p}

5

CN902 (7) REC/PB

8.5V_{p-p}

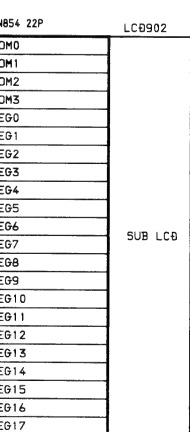
6

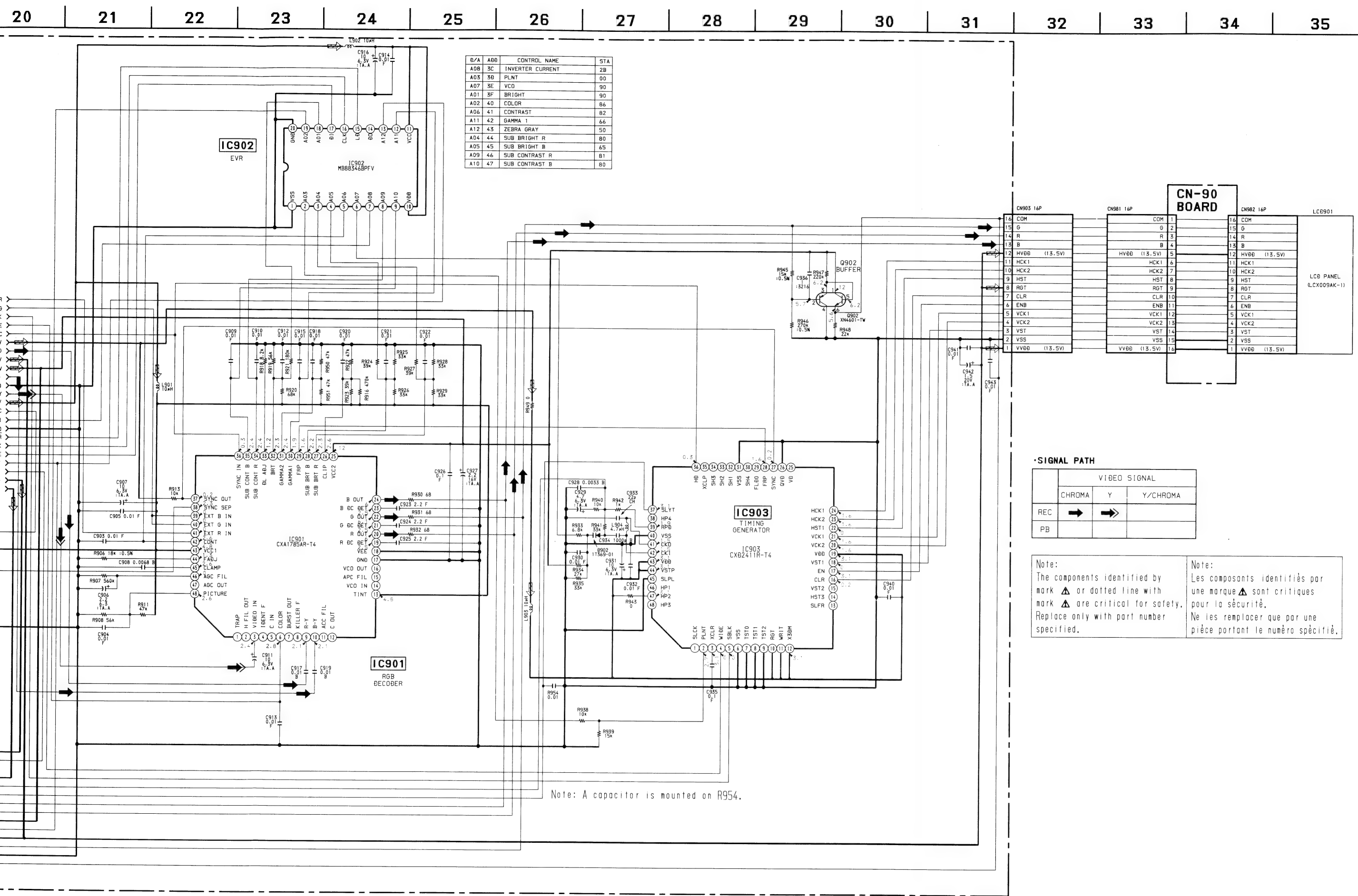
CN902 (8) REC/PB

9V_{p-p}

— Ref. No. VF-74 BOARD: 8000 series, CN-90 BOARD: 9000 series —

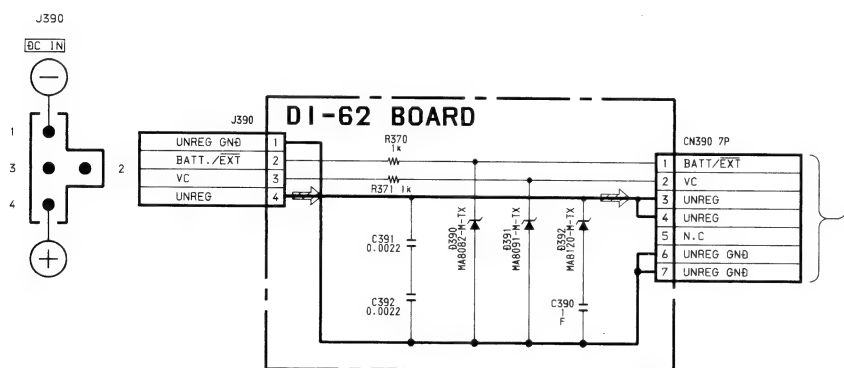
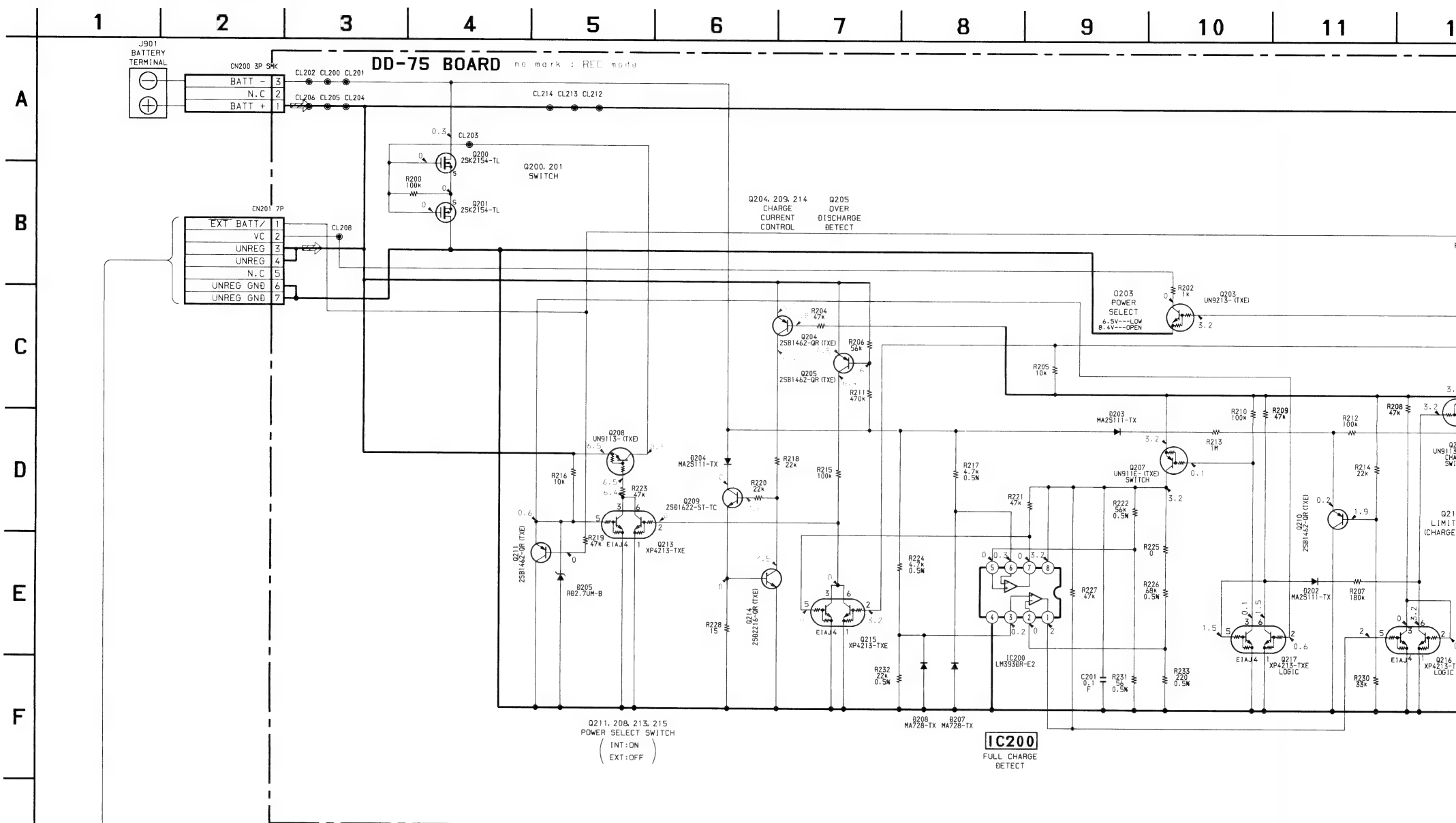










DD-75 (POWER), DI-62 (DC IN) SCHEMATIC DIAGRAMS


— Ref. No. DD-75, DI-62 BOARDS: 9000 series —



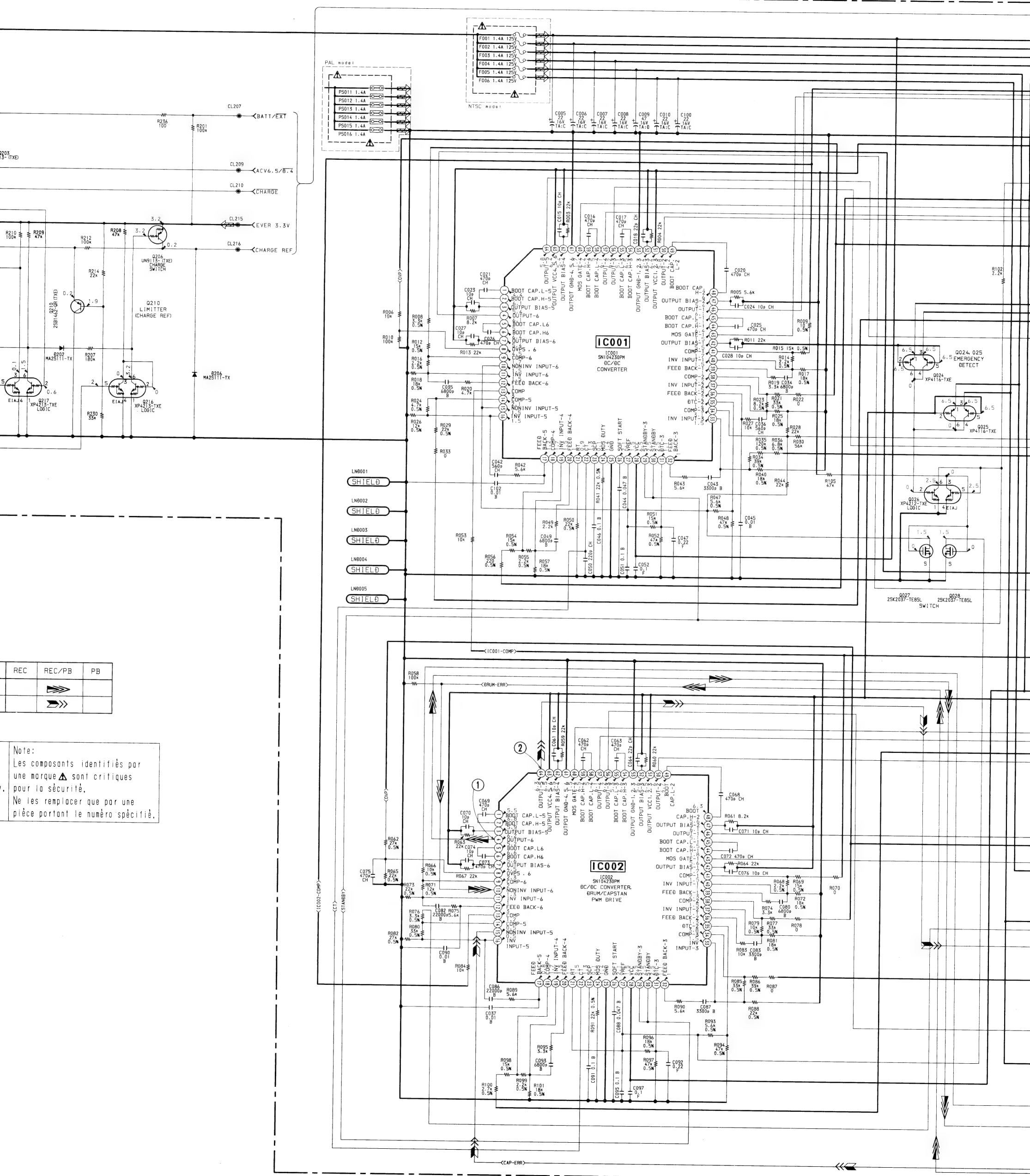
•SIGNAL PATH

	REC	REC/PB	PB
Drum servo (speed and phase)			
Capstan servo (speed and phase)			

Note:
The components identified by
mark  or dotted line with
mark  are critical for safety.
Replace only with part number
specified.

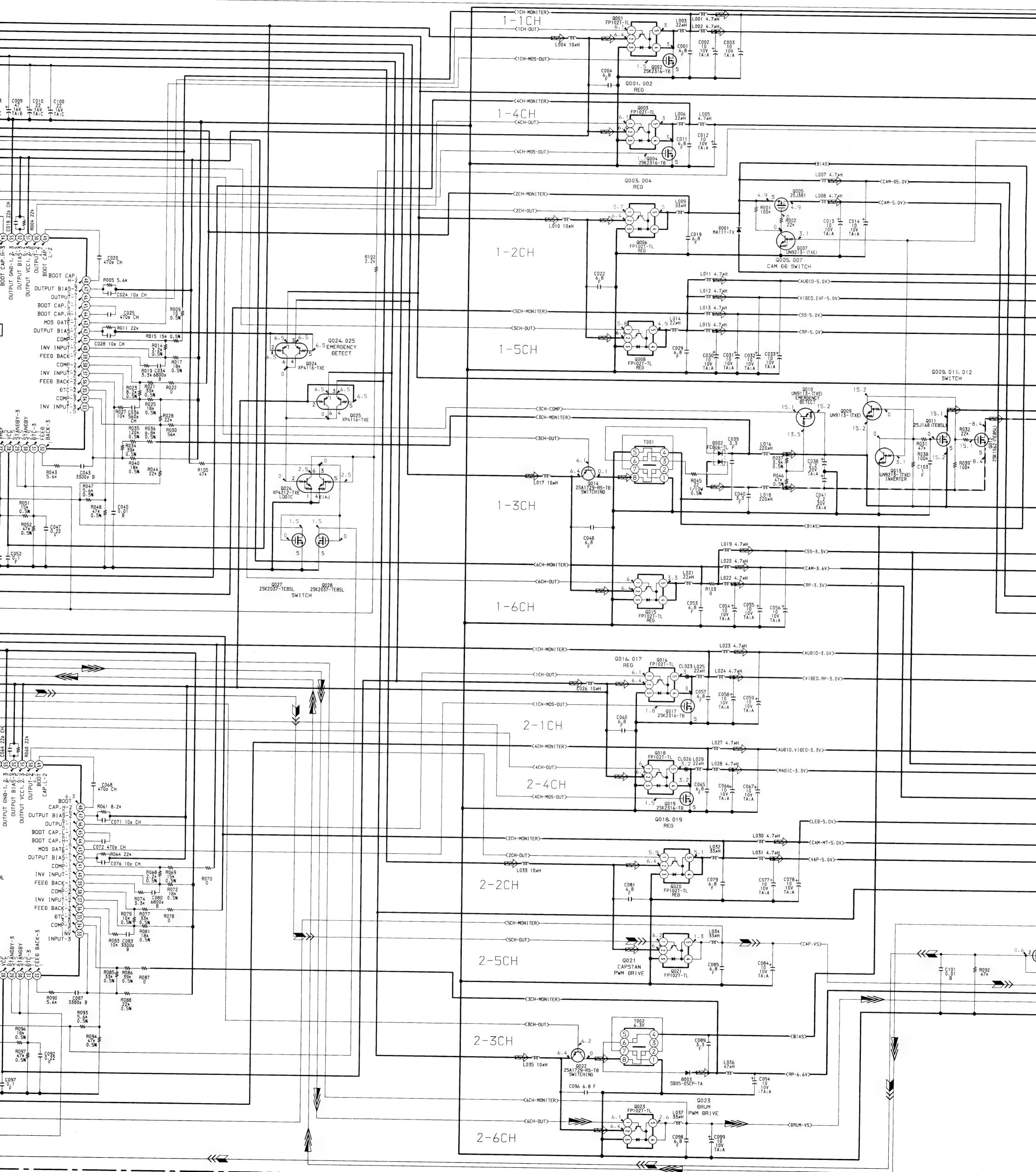
Note:
Les composants identifiés par
une marque  sont critiques
pour la sécurité.
Ne les remplacer que par une
pièce portant le numéro spécifié.

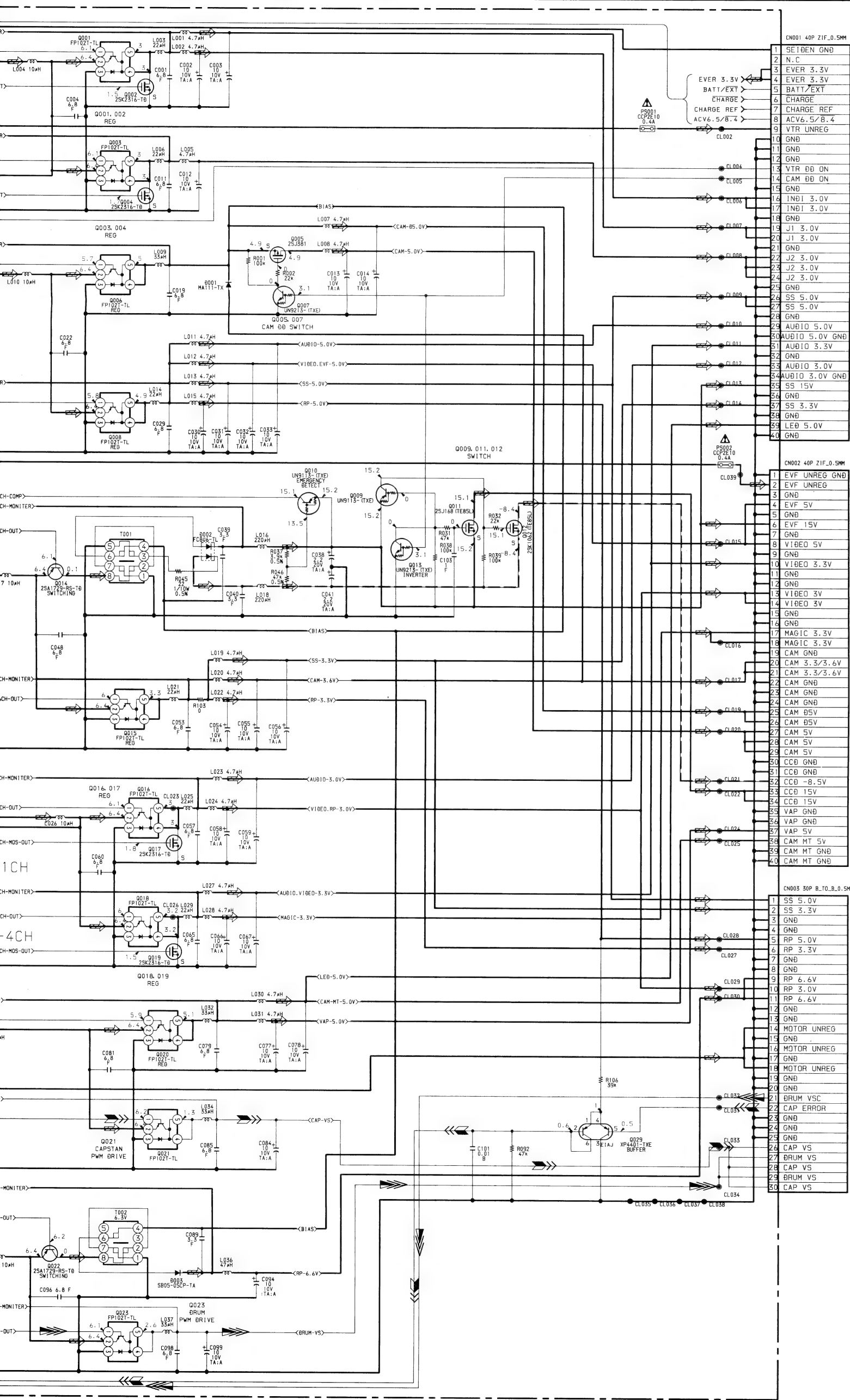
DCR-VX1000:NTSC model
DCR-VX1000E:PAL model



REC	REC/PB	PB

Note:
Les composants identifiés par
une marque Δ sont critiques
pour la sécurité.
Ne les remplacer que par une
pièce portant le numéro spécifié.



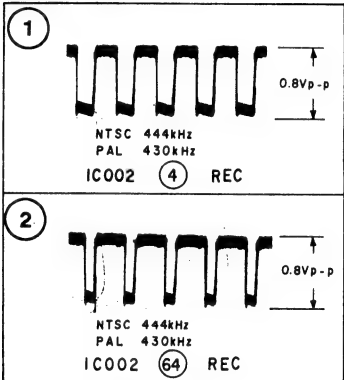


TO JC-12
BOARD
CN502
(SEE PAGE
4-67)

TO CB-49
BOARD
CN002
(SEE PAGE
4-23, 27, 29)

TO RS-63
BOARD
CN884
(SEE PAGE
4-82)

DD-75 BOARD



DCR-VX1000 : NTSC model
DCR-VX1000E : PAL model

DD-75 BOARD

C001	B-7	D002	B-5
C002	E-7	D003	C-3
C003	E-7	D202	B-1
C004	B-7	D203	B-2
C005	A-7	D204	G-1
C006	A-7	D205	C-1
C007	A-6	D206	B-1
C008	A-4	D207	G-2
C009	G-4	D208	G-2
C010	A-3		
C011	C-7	F001	A-7
C012	C-7	F002	A-6
C013	C-7	F003	A-5
C014	B-6	F004	A-4
C015	C-9	F005	A-4
C016	E-9	F006	A-3
C017	E-8		
C018	E-8	IC001	E-9
C019	B-6	IC002	G-8
C020	E-8	IC200	B-2
C021	E-9		
C022	B-7	L001	E-7
C023	C-9	L002	F-7
C024	E-8	L003	F-7
C025	E-8	L004	G-7
C026	E-8	L005	C-7
C027	E-9	L006	F-7
C028	C-8	L007	B-6
C029	C-6	L008	C-7
C030	E-6	L009	F-7
C031	E-6	L010	G-7
C032	E-6	L011	E-7
C033	E-6	L012	E-7
C034	E-6	L013	E-7
C035	E-6	L014	F-7
C036	T-8	L015	E-7
C037	T-8	L016	F-5
C038	C-5	L017	F-7
C039	B-5	L018	F-5
C040	B-5	L019	E-6
C041	C-5	L020	F-6
C042	T-9	L021	F-6
C043	T-8	L022	E-6
C044	C-8	L023	E-4
C045	T-8	L024	E-4
C046	C-9	L025	F-4
C047	B-8	L026	G-5
C048	B-6	L027	E-4
C049	T-9	L028	E-4
C050	T-9	L029	F-4
C051	F-8	L030	E-3
C052	C-8	L031	E-3
C053	B-6	L032	F-4
C054	E-6	L033	G-4
C055	F-6	L034	F-4
C056	F-6	L035	G-3
C057	B-4	L036	E-3
C058	E-4	L037	F-3
C059	E-4		
C060	B-5	PS001	C-6
C061	A-8	PS002	C-4
C062	G-8	PS011	A-7
C063	G-9	PS012	A-6
C064	A-9	PS013	A-5
C065	C-5	PS014	A-4
C066	E-4	PS015	A-4
C067	E-4	PS016	A-3
C068	G-9		
C069	G-8	Q001	B-7
C070	A-8	Q002	B-7
C071	A-9	Q003	B-7
C072	G-9	Q004	B-7
C073	G-8	Q005	C-7
C074	B-8	Q006	B-7
C075	A-8	Q007	C-6
C076	A-9	Q008	B-7
C077	E-3	Q009	E-5
C078	E-3	Q010	C-5
C079	B-3	Q011	E-6
C080	G-9	Q012	E-5
C081	B-4	Q013	E-6
C082	G-8	Q014	B-5
C083	T-9	Q015	B-6
C084	C-3	Q016	B-5
C085	C-4	Q017	B-4
C086	T-8	Q018	B-5
C087	T-9	Q019	B-4
C088	B-9	Q020	B-4
C089	B-3	Q021	C-4
C090	T-8	Q022	C-3
C091	B-8	Q023	B-3
C092	B-9	Q024	A-8
C093	T-8	Q025	A-8
C094	E-3	Q026	C-8
C095	B-9	Q027	C-8
C096	B-3	Q028	B-8
C097	B-9	Q029	C-3
C098	B-3	Q200	F-1
C099	B-3	Q201	F-1
C100	B-2	Q203	E-1
C101	B-8	Q204	B-1
C102	F-9	Q205	C-1
C103	E-6	Q206	B-1
C201	A-2	Q207	B-1
		Q208	E-1
CN001	D-6	Q209	G-1
CN002	D-3	Q210	B-2
CN003	C-2	Q211	C-1
CN200	A-1	Q213	C-1
CN201	C-1	Q214	G-1
		Q215	C-2
D001	C-6	Q216	B-1

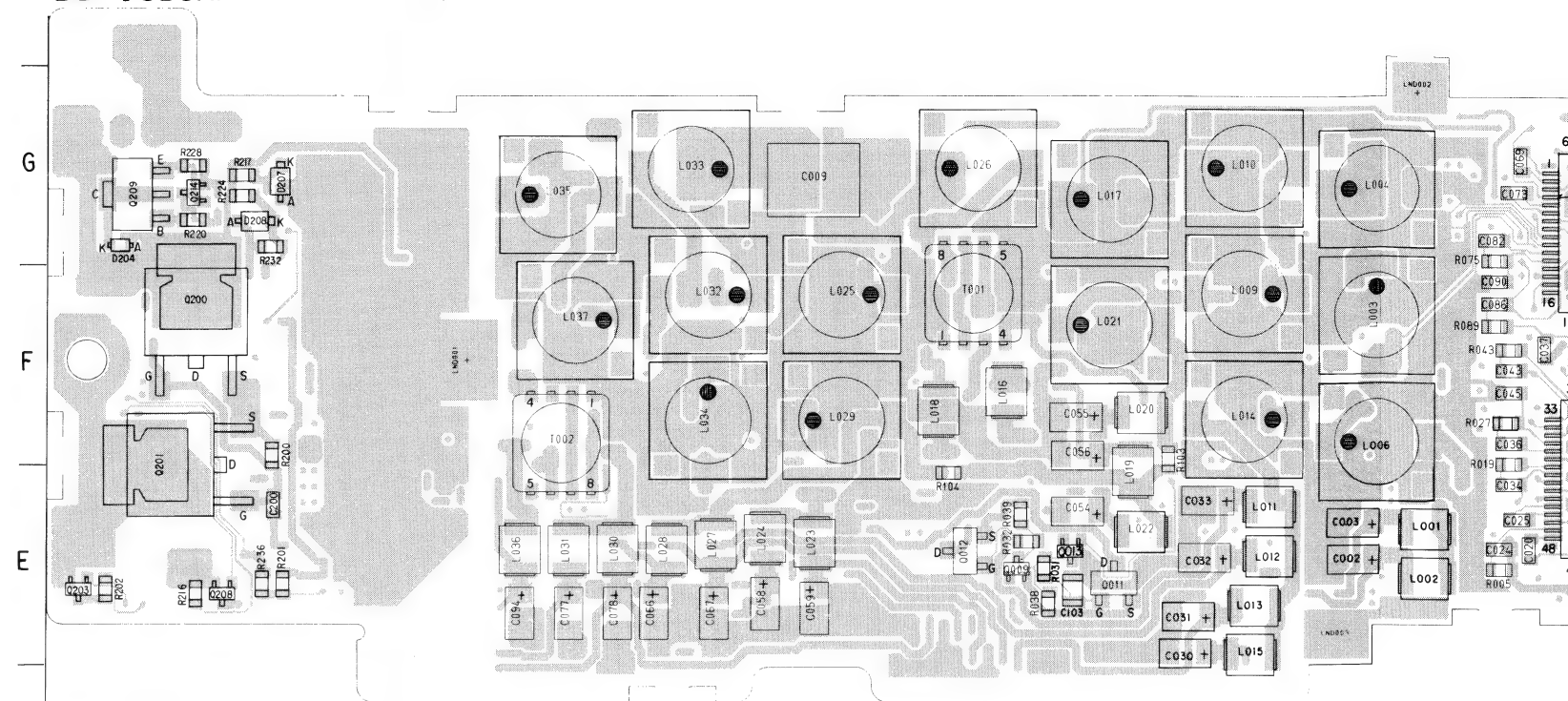
Q217	B-1	R001	C-6
		R002	C-6
		R003	C-8
		R004	E-8
		R005	E-8
		R006	C-9
		R007	C-9
		R008	C-9
		R009	C-8
		R010	C-9
		R011	C-8
		R012	C-9
		R013	E-9
		R014	C-8
		R015	C-8
		R016	C-9
		R017	C-8
		R018	C-8
		R019	C-8
		R020	T-9
		R021	C-8
		R022	C-8
		R023	C-8
		R024	C-8
		R025	C-8
		R026	C-8
		R027	T-9
		R028	C-8
		R029	C-8
		R030	C-8
		R031	C-8
		R032	C-8
		R033	C-8
		R034	C-8
		R035	C-8
		R036	C-8
		R037	C-8
		R038	C-8
		R039	C-8
		R040	B-8
		R041	C-9
		R042	T-8
		R043	T-8
		R044	B-8
		R045	B-5
		R046	C-5
		R047	C-8
		R048	C-8
		R049	T-9
		R050	T-9
		R051	B-8
		R052	B-8
		R053	C-9
		R054	B-9
		R055	B-9
		R056	B-9
		R057	B-9
		R058	B-8
		R059	A-8
		R060	A-9
		R061	A-9
		R062	A-9
		R063	A-8
		R064	B-9
		R065	A-9
		R066	A-8
		R067	B-8
		R068	A-9
		R069	A-9
		R070	A-9
		R071	A-8
		R072	B-9
		R073	B-8
		R074	G-9
		R075	G-8
		R076	B-8
		R077	B-9
		R078	B-9
		R079	B-9
		R080	B-8
		R081	B-9
		R082	B-8
		R083	F-9
		R084	B-8
		R085	B-9
		R086	B-9
		R087	B-9
		R088	B-9
		R089	F-8
		R090	F-9
		R091	B-8
		R092	B-8
		R093	B-9
		R094	B-9
		R095	F-8
		R096	B-9
		R097	B-9
		R098	B-8
		R099	B-8
		R100	B-8
		R101	B-8
		R102	C-8
		R103	F-6
		R105	C-8
		R106	C-3
		R200	F-2
		R201	E-2
		R202	E-1
		R204	B-1
		R205	C-2

R206	C-1
R207	B-1
R208	B-1
R209	B-1
R210	B-1
R211	C-1
R212	B-2
R213	B-2
R214	B-2
R215	C-1
R216	E-1
R217	G-1
R218	B-1
R219	C-1
R220	G-1
R221	A-2
R222	A-2
R223	C-1
R224	G-1
R225	A-2
R226	B-2
R227	B-2
R228	G-1
R230	B-2
R231	A-1
R232	G-2
R233	F-2
R236	F-2
T001	F-5
T002	F-3

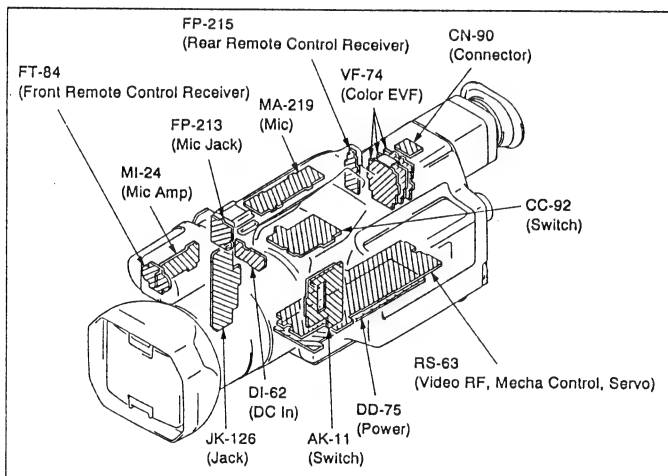
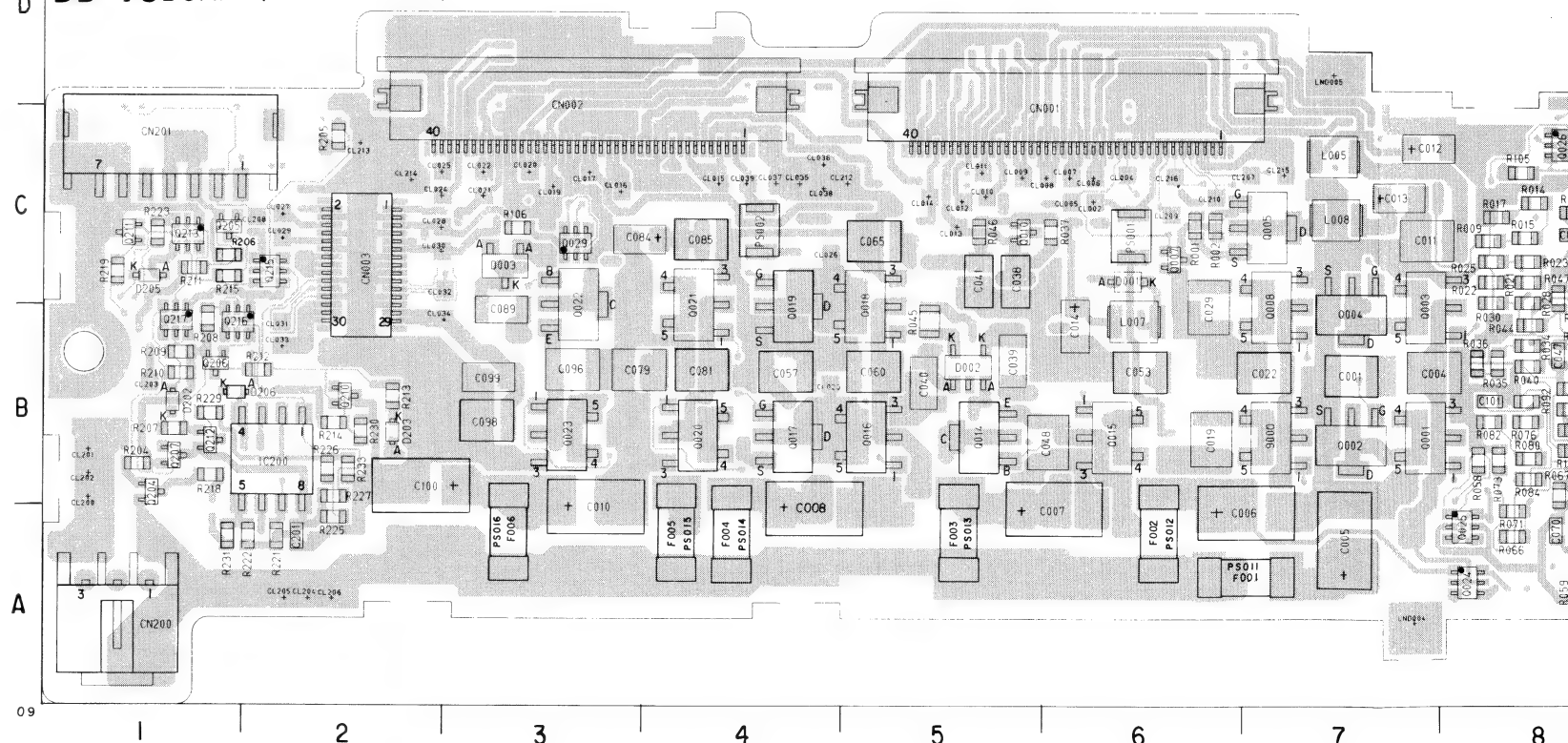
DD-75 (POWER), DI-62 (DC IN) PRINTED WIRING BOARDS

— Ref. No. DD-75, DI-62 BOARDS: 9000 series —

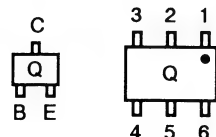
DD-75 BOARD (COMPONENT SIDE)



DD-75 BOARD (CONDUCTOR SIDE)



- For printed wiring boards.
- This board is six-layer print board. However, the patterns of layers 2 to 5 have not been included in the diagram.
- Chip transistor

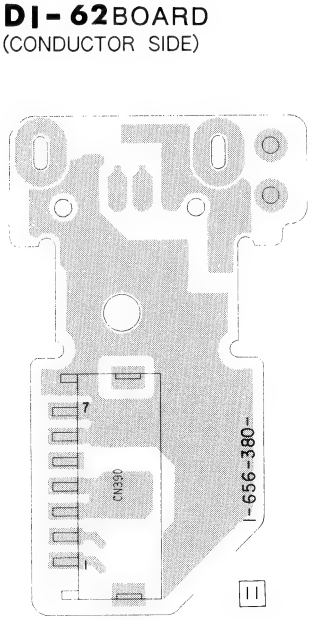
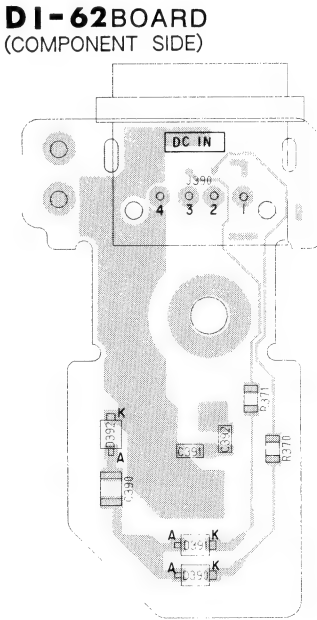
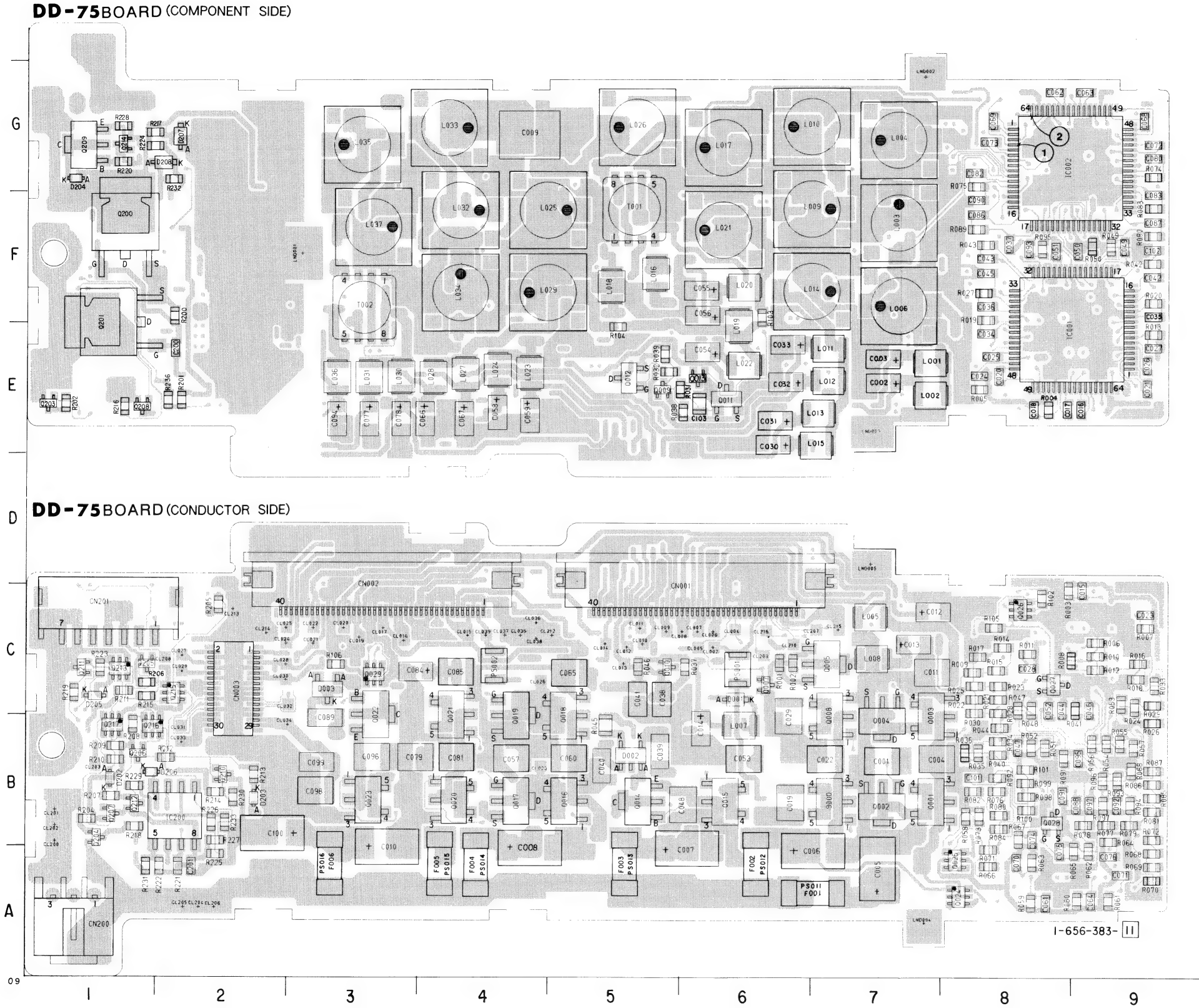


DD-75 (POWER), DI-62 (DC IN) PRINTED WIRING BOARDS

— Ref. No. DD-75, DI-62 BOARDS: 9000 series —

206 C-1
207 B-1
208 B-1
209 B-1
210 B-1
211 C-1
212 B-2
213 B-2
214 B-2
215 C-1
216 E-1
217 G-1
218 B-1
219 C-1
220 G-1
221 A-2
222 A-2
223 C-1
224 G-1
225 A-2
226 B-2
227 B-2
228 G-1
230 B-2
231 A-1
232 G-2
233 B-2
236 E-2

001 F-5
002 F-3



SECTION 5



REPAIR PARTS LIST


5-1. EXPLODED VIEWS

NOTE:

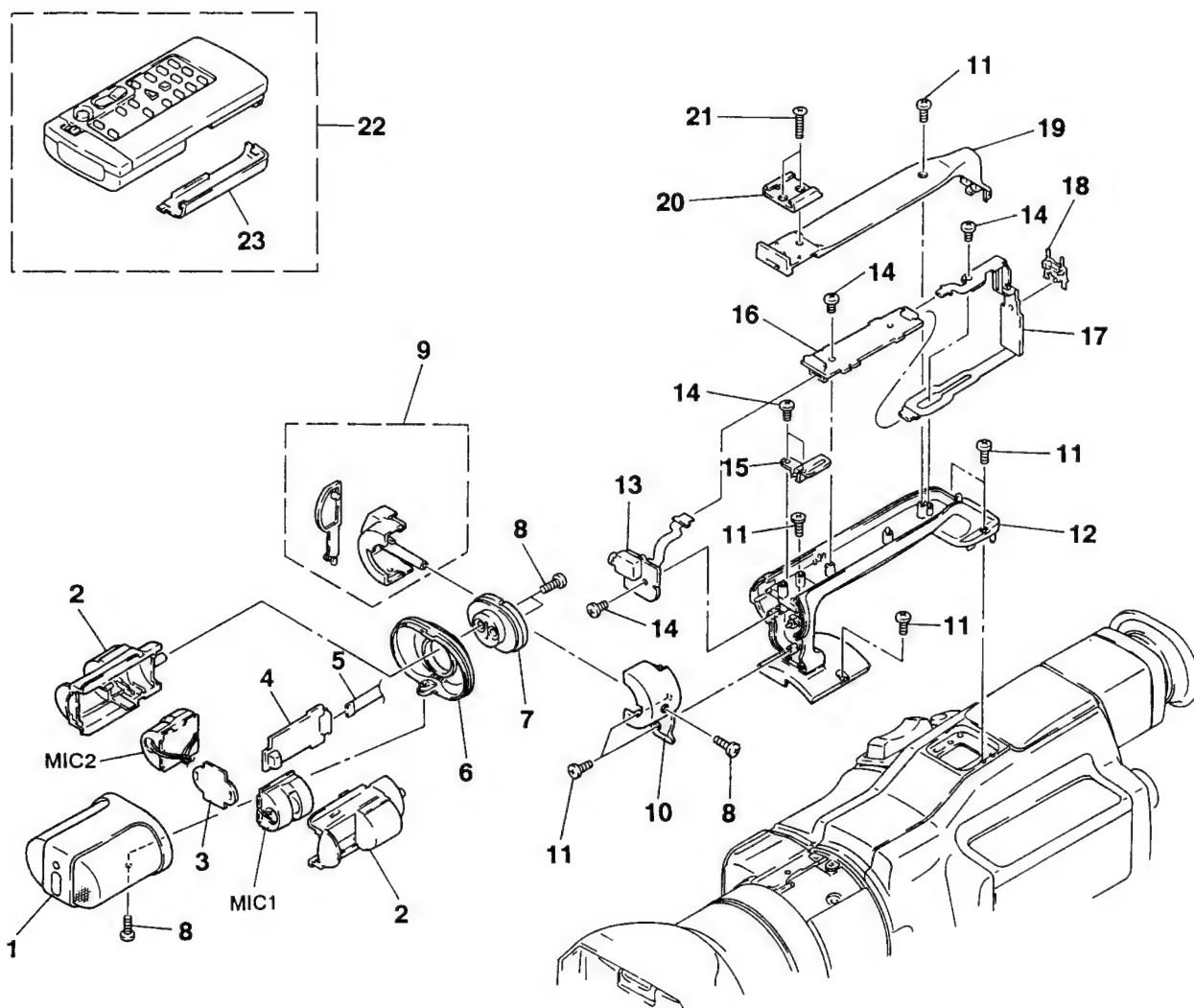
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.
- Canadian model is abbreviated as CND.

The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque  sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

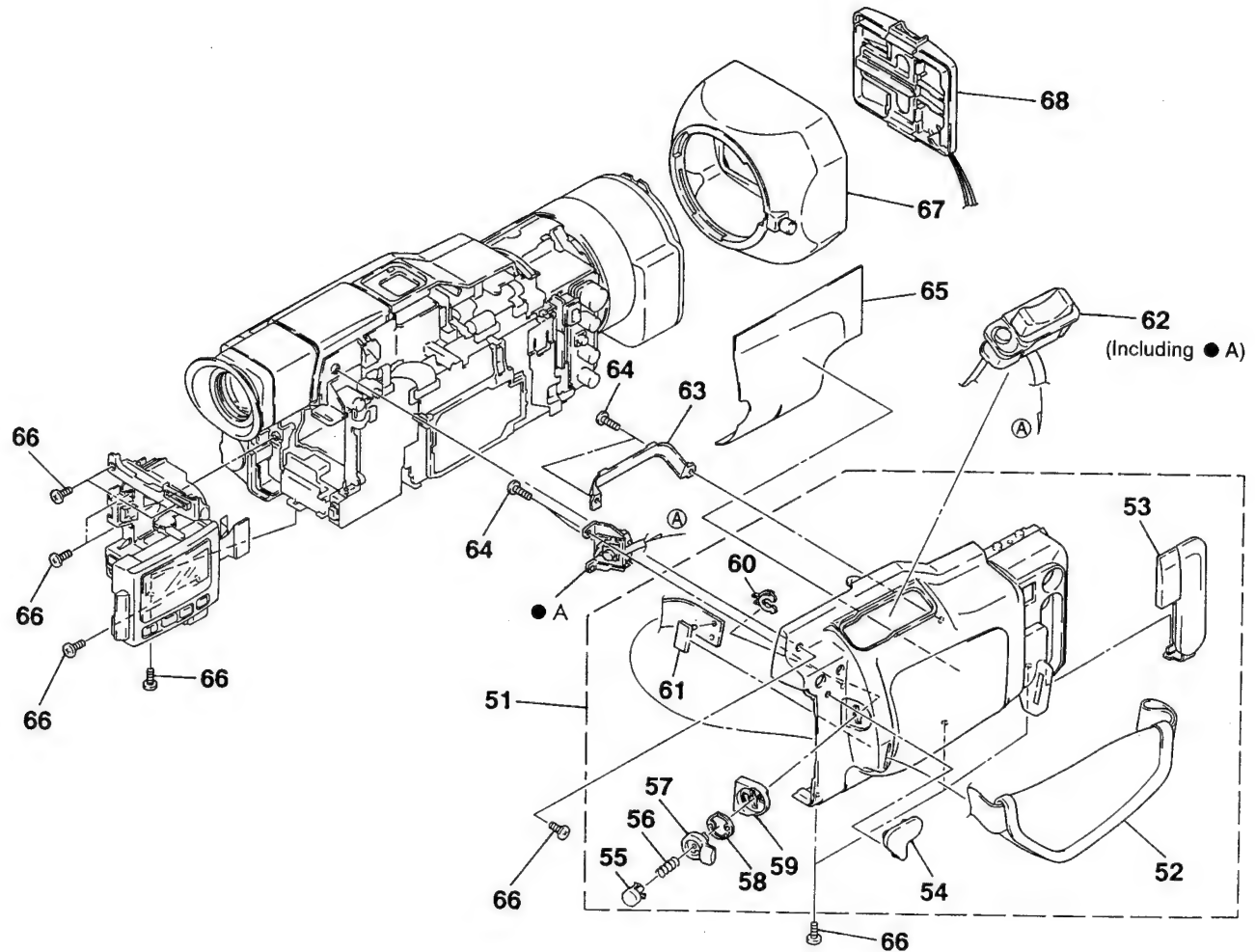
5-1-1. HANDLE BLOCK ASSEMBLY



<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
1	X-3945-075-1	MASK ASSY, MICROPHONE
2	3-963-968-01	CASE, MICROPHONE
* 3	A-7072-231-A	FT-84 BOARD, COMPLETE
* 4	A-7066-444-A	MI-24 BOARD, COMPLETE
5	1-656-390-11	FP-203 FLEXIBLE BOARD
6	3-963-964-01	COVER, MICROPHONE
7	X-3945-076-1	NECK ASSY, RUBBER
8	3-964-014-01	SCREW, TAPPING
9	X-3945-537-1	CABINET (R) ASSY, MICROPHONE
10	3-963-969-01	CABINET (L), MICROPHONE
11	3-964-010-01	SCREW M2
12	3-963-950-01	HANDLE
* 13	A-7072-311-A	FP-213 BOARD, COMPLETE

Remark	Ref. No.	Part No.	Description	Remark
	14	3-713-786-51	SCREW (M2x3)	
	15	3-963-951-01	BRACKET, HANDLE STRAP	
	* 16	A-7066-436-A	MA-219 BOARD, COMPLETE	
	* 17	A-7072-312-A	FP-215 BOARD, COMPLETE	
	18	3-963-937-01	HOLDER, TB	
	19	X-3945-536-1	COVER ASSY, HANDLE	
	20	3-724-511-01	SHOE, ACCESSORY	
	21	3-948-809-01	SCREW (M2x6)	
	22	8-917-268-90	REMOTE CONTROL RMT-803 SET	
	23	3-742-854-21	BATTERY CASE LID (for RMT-803)	
	MIC1	1-542-263-11	MICROPHONE UNIT (L-CH)	
	MIC2	1-542-263-11	MICROPHONE UNIT (R-CH)	

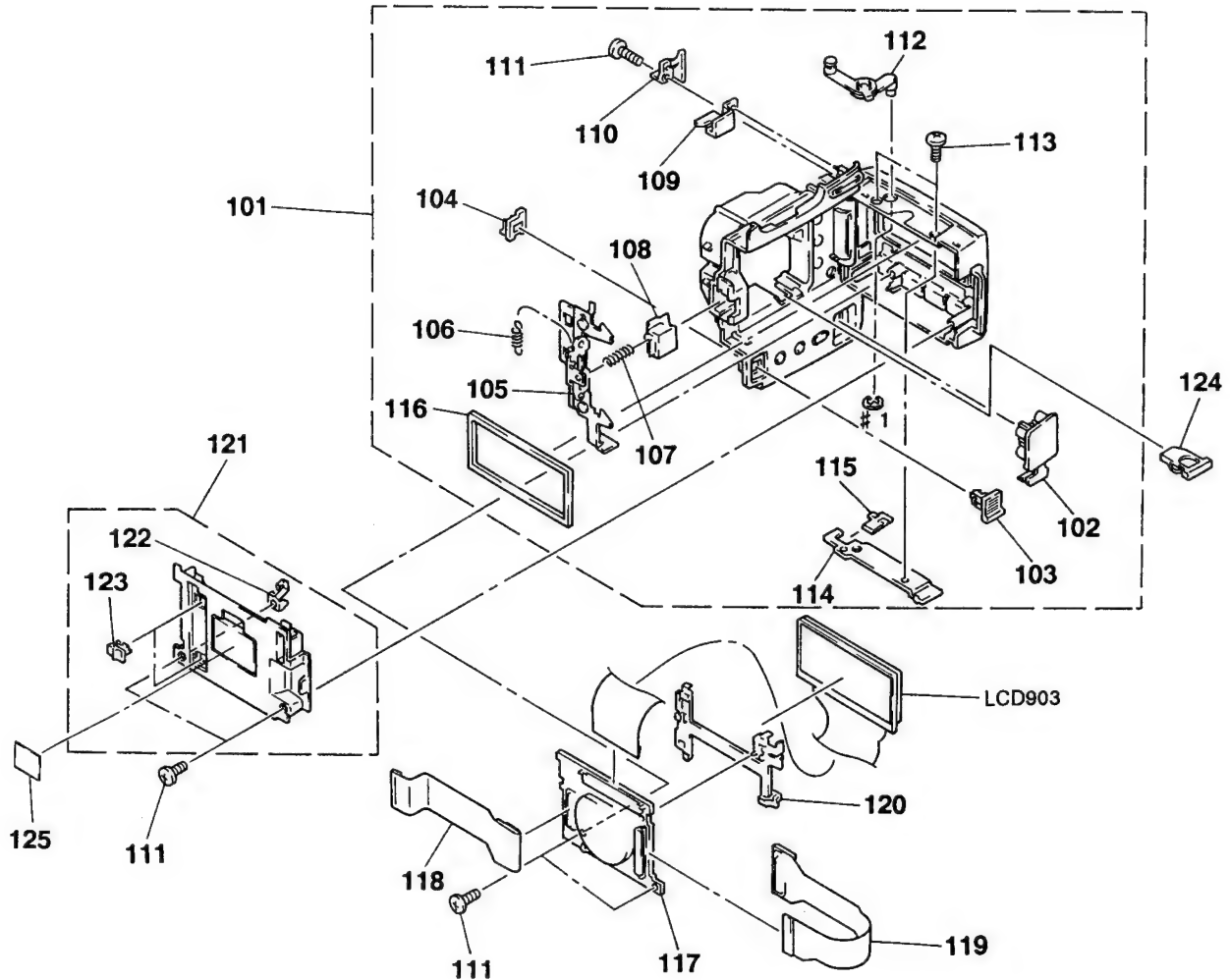
5-1-2. CABINET (L) ASSEMBLY



Ref. No.	Part No.	Description
51	X-3945-533-1	CABINET (L) ASSY (VX1000E)
51	X-3945-642-1	CABINET (L) ASSY (VX1000)
52	3-964-051-01	BELT, GRIP
53	3-963-970-01	COVER (AV), JACK
54	3-963-959-01	COVER (HL), JACK
55	3-963-954-01	BUTTON, S/S
56	3-578-221-00	SPRING, COMPRESSION
57	3-963-966-01	KNOB, STAND-BY
58	3-736-364-01	SPRING
59	3-963-961-01	BASE, STAND-BY KNOB

Remark	Ref. No.	Part No.	Description	Remark
	60	3-963-956-01	HOLDER, STAND-BY	
	61	3-942-895-01	STOPPER, BELT	
	62	1-473-137-21	SWITCH BLOCK, CONTROL (ZK4500)	
	63	3-963-958-01	HOLDER, ZOOM	
	64	3-964-014-01	SCREW, TAPPING	
	65	3-966-132-01	SHEET, MIRROR	
	66	3-964-010-01	SCREW M2	
	67	X-3945-078-1	HOOD ASSY, LENS	
	68	X-3945-082-1	CAP ASSY, HOOD	

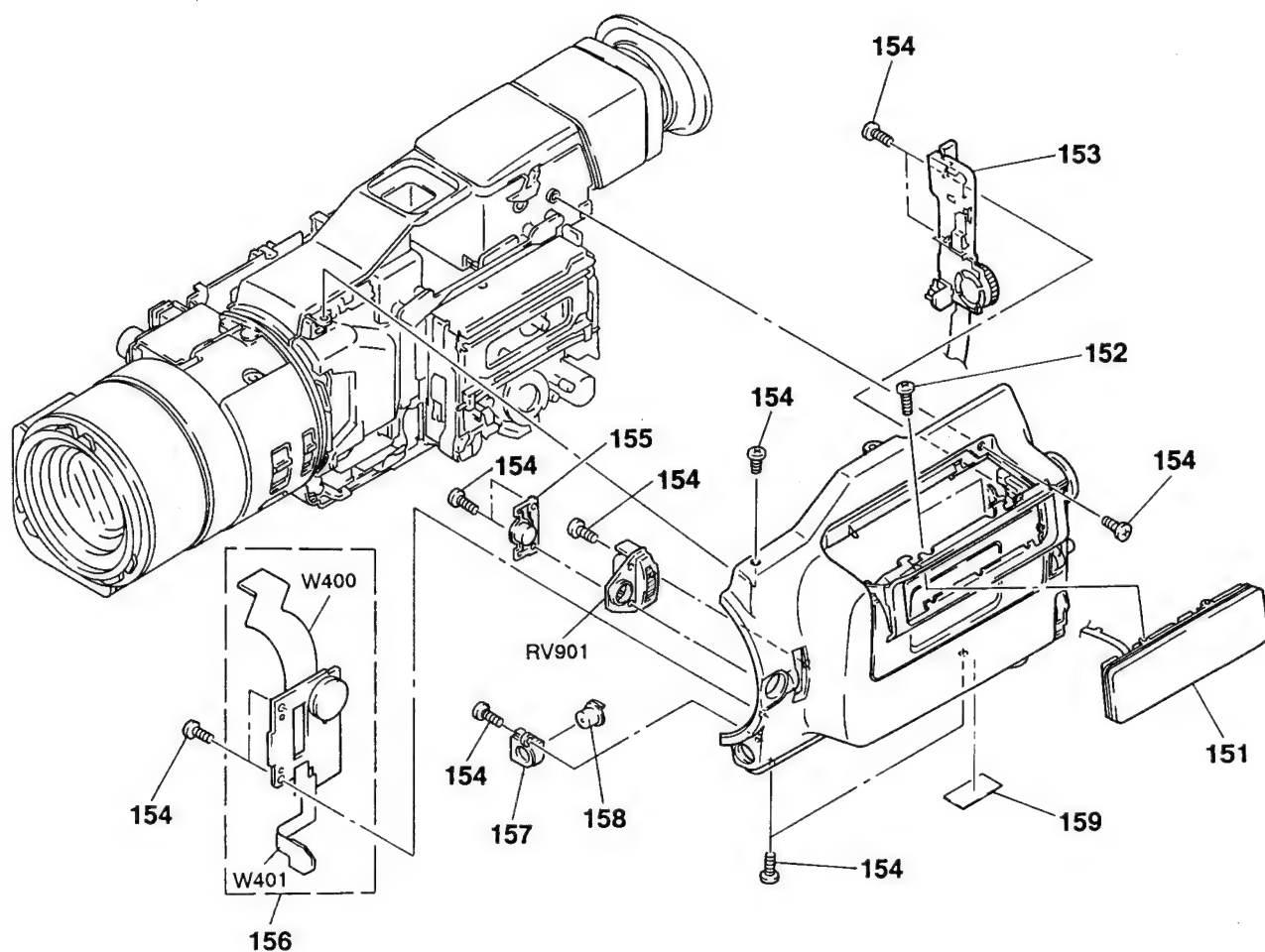
5-1-3. CABINET (REAR) ASSEMBLY



Ref. No.	Part No.	Description
101	X-3945-534-1	CABINET (REAR) ASSY (VX1000E)
101	X-3945-643-1	CABINET (REAR) ASSY (VX1000)
102	3-963-843-01	COVER (ID), JACK
103	3-963-846-01	KNOB, BT OPEN
104	3-963-847-01	PLATE, SLIDE, BT
105	X-3945-072-1	PLATE ASSY, LOCK, BT
106	3-964-731-01	SPRING, TENSION
107	3-964-732-01	SPRING, COMPRESSION
108	3-963-855-01	RETAINER, BT
* 109	3-963-830-01	PLATE, FIXED (1), LINK
110	3-963-854-01	LID, BT SHAFT
111	3-964-014-01	SCREW, TAPPING
112	X-3945-071-1	LINK ASSY, BT
113	3-964-010-11	SCREW M2
* 114	3-963-831-01	PLATE, FIXED (2), LINK

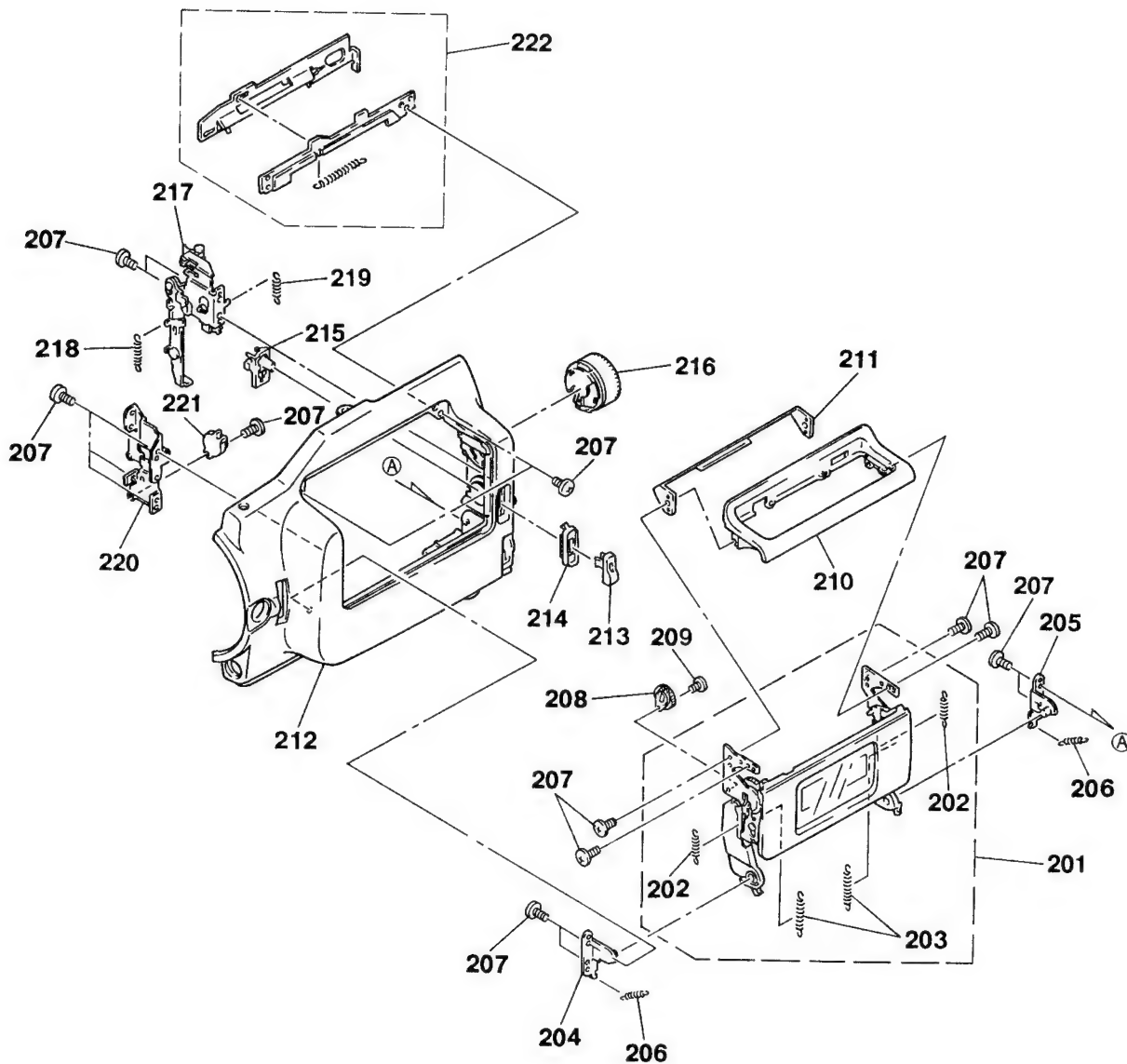
Remark	Ref. No.	Part No.	Description	Remark
	115	3-964-019-01	LIGHT GUIDE, BT	
	116	3-964-021-01	PAD, LCD	
	* 117	A-7072-229-A	LI-49 BOARD, COMPLETE	
	* 118	A-7072-309-A	FP-204 BOARD, COMPLETE	
	* 119	A-7072-310-A	FP-206 BOARD, COMPLETE	
	120	3-963-905-01	HOLDER (BT), LCD	
	121	X-3945-535-1	PLATE ASSY, REAR, BT (VX1000E)	
	121	X-3945-644-1	PLATE ASSY, REAR, BT (VX1000)	
	122	3-963-834-01	SPRING, BT	
	123	3-963-845-01	BUTTON, ON/OFF	
	124	3-963-819-01	LID, CH	
	125	3-704-256-01	LABEL, CAUTION (VX1000:US)	
	LCD903	1-810-864-21	DISPLAY PANEL, LIQUID CRYSTAL	

5-1-4. CABINET (R) ASSEMBLY (1)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	1-473-139-21	SWITCH BLOCK, CONTROL (VK4500) (VX1000)		157	3-963-910-01	HOLDER, FADER	
151	1-473-139-31	SWITCH BLOCK, CONTROL (VK4500) (VX1000E)		158	3-963-865-01	BUTTON, FADER	
152	3-964-014-01	SCREW, TAPPING		* 159	3-704-235-01	LABEL, CAUTION (VX1000E:UK)	
153	1-473-136-11	SWITCH BLOCK, CONTROL (PA4500)					
154	3-964-010-01	SCREW M2		RV901	1-762-344-11	SWITCH, ROTARY (ENCODER) (EXPOSURE)	
155	3-963-886-01	BUTTON, EXP		W400	1-656-387-11	FP-200 FLEXIBLE BOARD	
* 156	A-7072-228-A	AK-11 BOARD, COMPLETE		W401	1-656-388-11	FP-201 FLEXIBLE BOARD	

5-1-5. CABINET (R) ASSEMBLY (2)

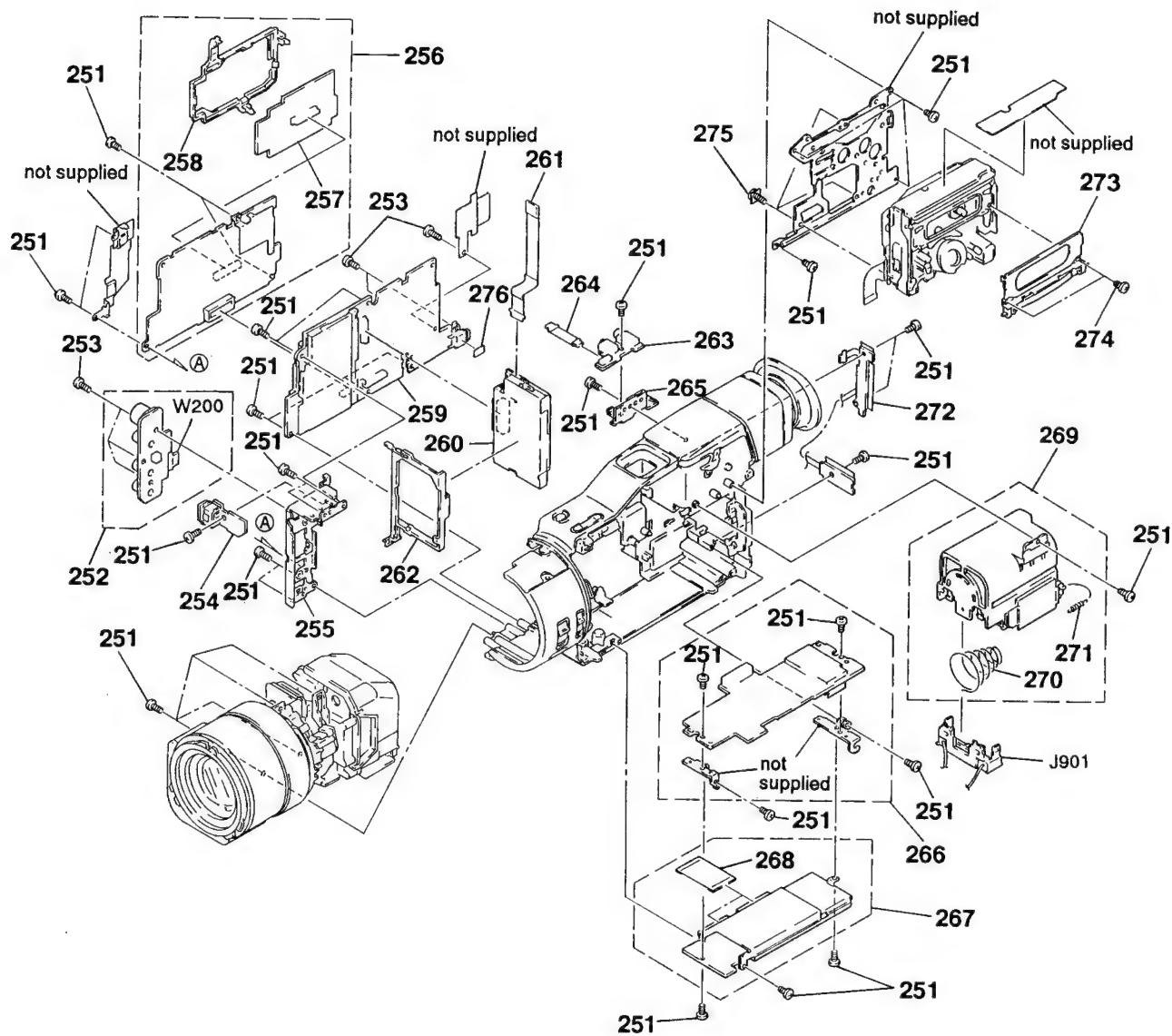


Ref.No.	Part No.	Description
201	X-3945-675-1	LID ASSY, CASSETTE (VX1000)
201	X-3945-762-1	LID ASSY, CASSETTE (VX1000E)
202	3-966-329-01	SPRING, TENSION
203	3-964-012-01	SPRING, TENSION
204	X-3945-062-1	BRACKET (F) ASSY, LID LOWER
205	X-3945-061-1	BRACKET (R) ASSY, LID LOWER
206	3-964-011-01	SPRING, TENSION
207	3-713-786-51	SCREW (M2x3)
208	3-965-303-01	DAMPER
209	3-728-103-11	SCREW (M1.4x1.6), SPECIAL HEAD
210	3-963-917-01	LID (UPPER), CASSETTE
211	3-963-887-01	PLATE, LOCK, VK
212	X-3945-763-1	CABINET (R) ASSY (VX1000)

Ref.No.	Part No.	Description
212	X-3945-761-1	CABINET (R) ASSY (VX1000E)
213	3-963-866-01	KNOB, EJECT
214	3-963-879-01	FRAME, EJECT
215	3-963-878-01	LEVER, EJECT
216	X-3945-532-1	DIAL ASSY, POWER (VX1000E)
216	X-3945-641-1	DIAL ASSY, POWER (VX1000)
217	X-3945-060-1	BRACKET ASSY, FIXED SHAFT
218	3-965-306-02	SPRING (CS LOCK), TENSION
219	3-964-729-01	SPRING, TENSION
220	X-3945-063-1	BRACKET ASSY, DAMPER
221	3-953-235-21	DAMPER, OIL
222	X-3945-905-1	PLATE ASSY, LOCK

Remark

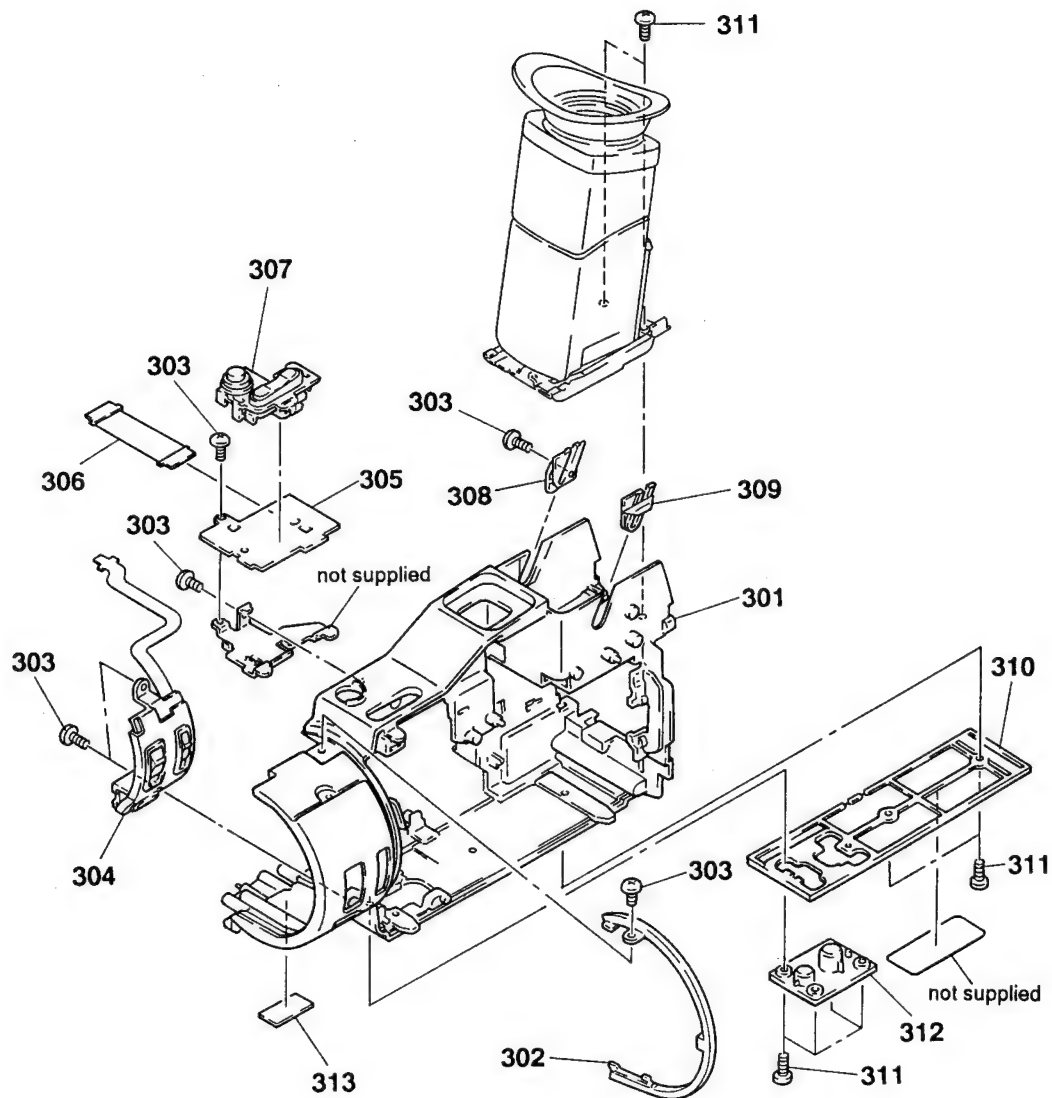
5-1-6. MAIN BOARDS ASSEMBLY



Ref. No.	Part No.	Description
251	3-713-786-51	SCREW (M2x3)
* 252	A-7072-221-A	JK-126 BOARD, COMPLETE
253	3-964-010-01	SCREW M2
* 254	A-7072-223-A	DI-62 BOARD, COMPLETE
* 255	3-963-944-01	PLATE, JACK
* 256	A-7066-430-A	CB-49 BOARD, COMPLETE (VX1000)
* 256	A-7066-610-A	CB-49P BOARD, COMPLETE (VX1000E)
* 257	A-7072-219-A	MG-16 BOARD, COMPLETE
258	3-965-312-01	FRAME, MG
* 259	A-7066-611-A	JC-12P BOARD, COMPLETE (VX1000E)
* 259	A-7066-693-A	JC-12 BOARD, COMPLETE (VX1000)
* 260	A-7066-433-A	AU-179 BOARD, COMPLETE
261	1-656-394-11	FP-208 FLEXIBLE BOARD
262	3-963-941-01	FRAME, AU FIXED
* 263	A-7072-222-A	HL-5 BOARD, COMPLETE
264	1-656-384-11	FP-197 FLEXIBLE BOARD

Remark	Ref. No.	Part No.	Description	Remark
	265	3-963-833-01	SHEET METAL (UPPER), STRAP	
	* 266	A-7066-432-A	RS-63 BOARD, COMPLETE	
	* 267	A-7066-434-A	DD-75 BOARD, COMPLETE (VX1000)	
	* 267	A-7066-612-A	DD-75P BOARD, COMPLETE (VX1000E)	
	268	1-656-386-11	FP-199 FLEXIBLE BOARD	
	269	X-3945-056-1	HOLDER ASSY, BATTERY	
	270	3-963-996-01	SPRING, PUSH-OUT	
	271	3-509-127-00	SPRING, TENSION	
	272	1-656-392-11	FP-205 FLEXIBLE BOARD	
	273	X-3945-057-1	PLATE ASSY, ORNAMENTAL	
	274	3-728-103-11	SCREW (M1.4X1.6), SPECIAL HEAD	
	275	X-3945-526-1	SCREW ASSY, FASTENING	
	276	3-967-170-01	SPACER, ID	
	J901	1-537-875-11	TERMINAL BOARD, BATTERY	
	W200	1-656-398-11	FP-214 FLEXIBLE BOARD	

5-1-7. CENTER FRAME ASSEMBLY

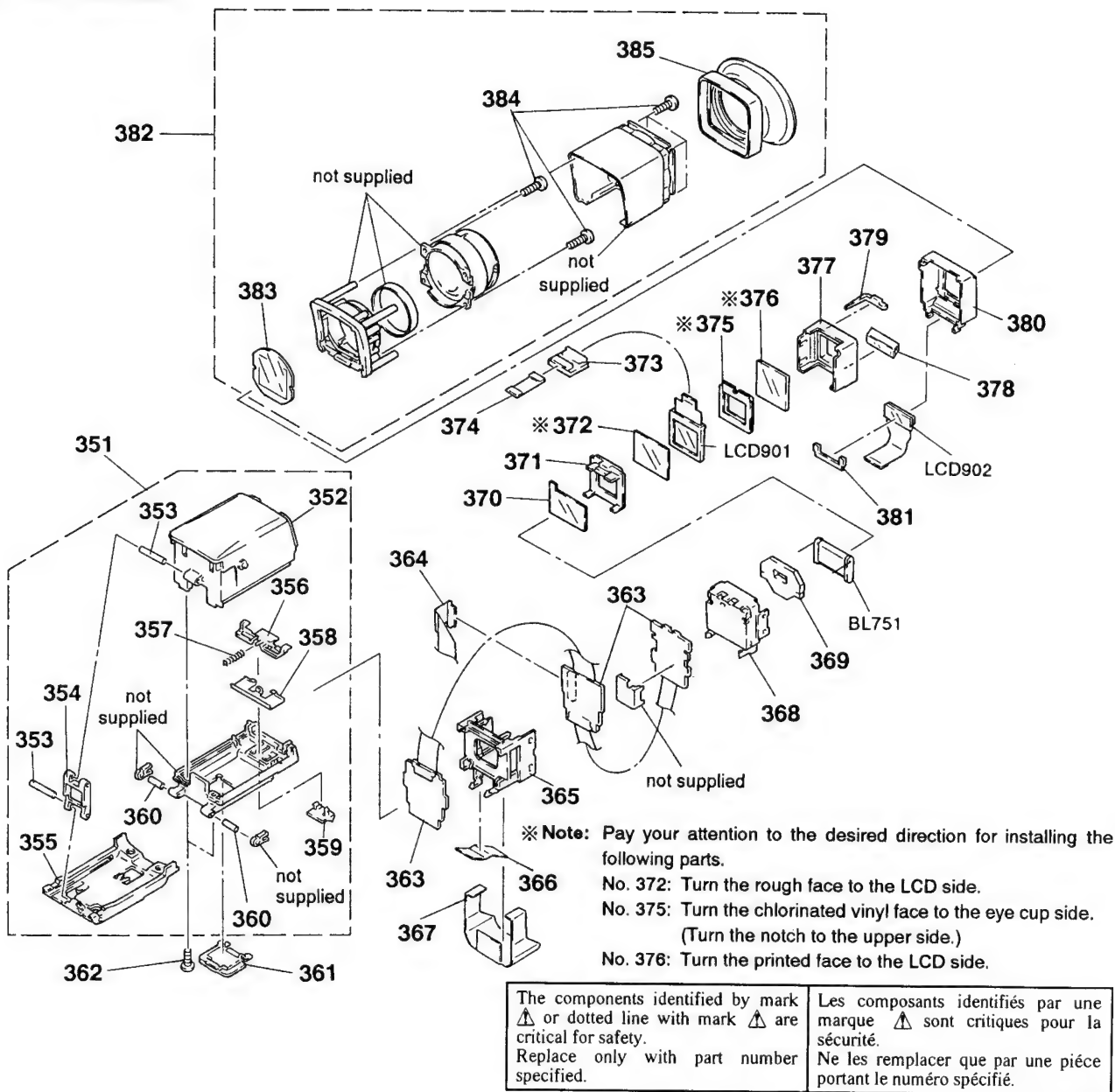


Ref. No.	Part No.	Description
301	3-964-009-11	FRAME, CENTER
* 302	3-963-942-01	PLATE, ORNAMENTAL, CENTER FRAME
303	3-713-786-51	SCREW (M2x3)
304	1-473-138-11	SWITCH BLOCK, CONTROL (FI4500)
* 305	A-7072-220-A	CC-92 BOARD, COMPLETE
306	1-656-395-11	FP-209 FLEXIBLE BOARD
307	X-3945-058-1	BUTTON ASSY, ES

Ref. No.	Part No.	Description
308	3-963-841-01	GUIDE (L), LOCUS
309	3-963-840-01	GUIDE (R), LOCUS
310	X-3945-079-1	BOTTOM ASSY, CABINET
311	3-964-010-01	SCREW M2
312	3-963-940-01	TABLE, TRIPOD
* 313	3-704-367-31	LABEL (VX1000:US)

Remark

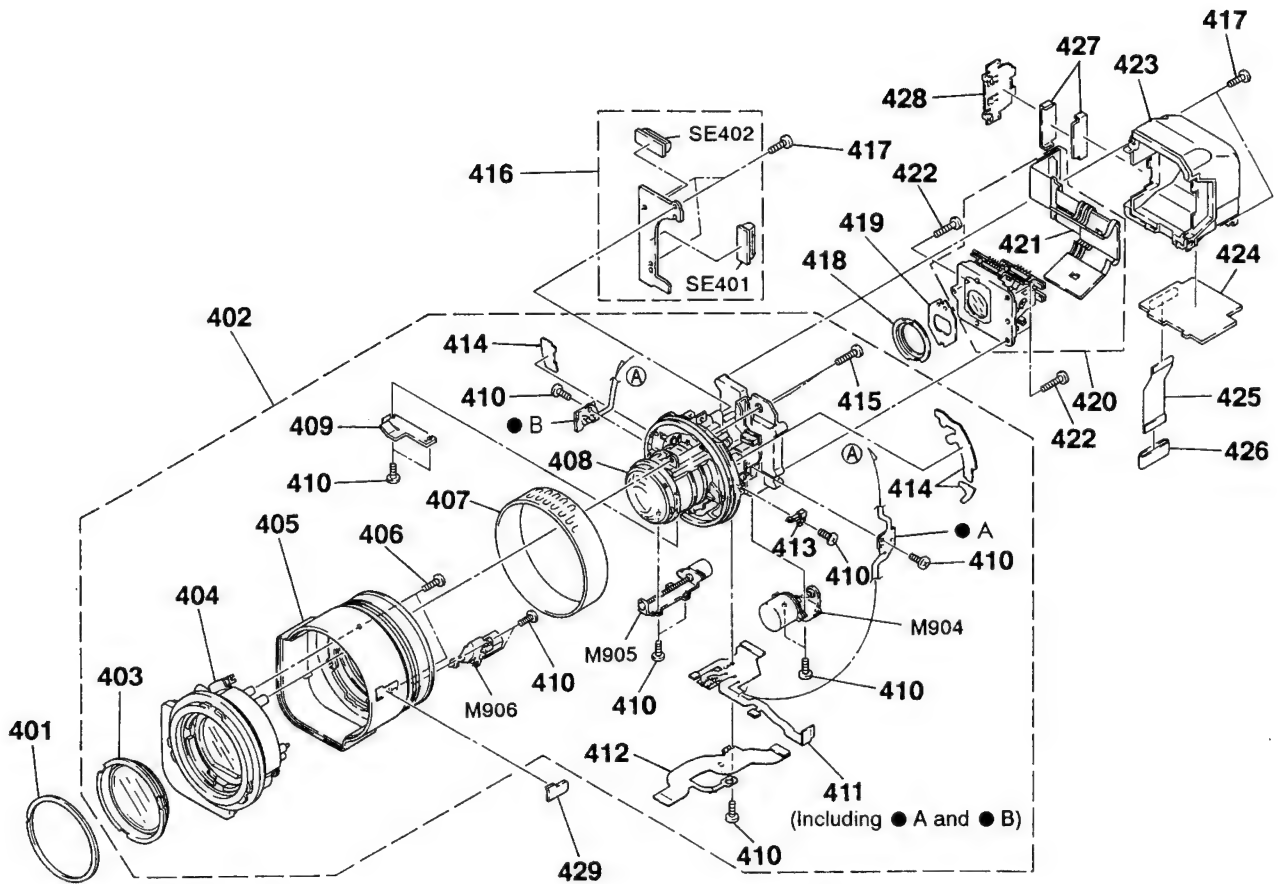
5-1-8. EVF ASSEMBLY



<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
351	X-3945-052-1	CABINET ASSY, EVF
352	3-963-913-01	CABINET (UPPER), EVF
353	3-963-816-01	SHAFT (2), TILT
354	3-963-815-01	ARM, TILT
355	3-963-901-01	BASE, TILT
356	3-963-821-01	LEVER, LOCK
357	3-302-492-00	SPRING, COMPRESSION
358	3-963-823-01	STOPPER, LOCK
359	3-963-822-01	KNOB, LOCK
360	3-963-817-01	SHAFT (1), TILT
361	3-963-936-01	LID, VF ADJUSTMENT
362	3-964-014-01	SCREW, TAPPING
* 363	A-7072-227-A	VF-74 BOARD, COMPLETE
364	1-656-400-11	FP-217 FLEXIBLE BOARD
365	3-963-909-01	HOLDER, PC BOARD
366	3-965-309-01	SHEET (2), ELECTROSTATIC, VF
367	3-965-308-01	SHEET (1), ELECTROSTATIC, VF
368	X-3945-055-1	CAP ASSY, BL
369	3-964-129-01	SEALER, BL
370	3-965-906-01	FILTER, CONDENSE

<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
	371	X-3945-054-1	HOLDER ASSY, BL	
	372	3-966-073-01	ILLUMINATOR, PRECISION BL	
*	373	A-7072-226-A	CN-90 BOARD, COMPLETE	
	374	1-656-401-11	FP-218 FLEXIBLE BOARD	
	375	3-963-993-01	FRAME, SCREEN	
	376	3-964-725-01	PROTECTOR, LCD	
	377	3-963-907-01	HOLDER, LCD	
	378	3-963-862-01	PRISM, LCD	
	379	3-963-853-01	GUIDE, TALLY	
	380	3-963-864-01	HOLDER (LOWER), LCD	
	381	3-964-048-01	SPACER, SUB	
	382	X-3945-053-1	FINDER ASSY (VX1000)	
	382	X-3945-531-1	FINDER ASSY (VX1000E)	
	383	3-965-310-01	PLATE, POLARIZATION	
	384	3-719-401-11	SCREW (B1.7), TAPPING	
	385	3-963-904-01	EYE CUP	
▲	BL751	1-519-746-81	TUBE, FLUORESCENT (0.7 INCH)(BACK LIGHT)	
	LCD901	8-753-016-04	LTX009AK-1	
	LCD902	1-810-865-11	DISPLAY PANEL, LIQUID CRYSTAL (for EVF)	

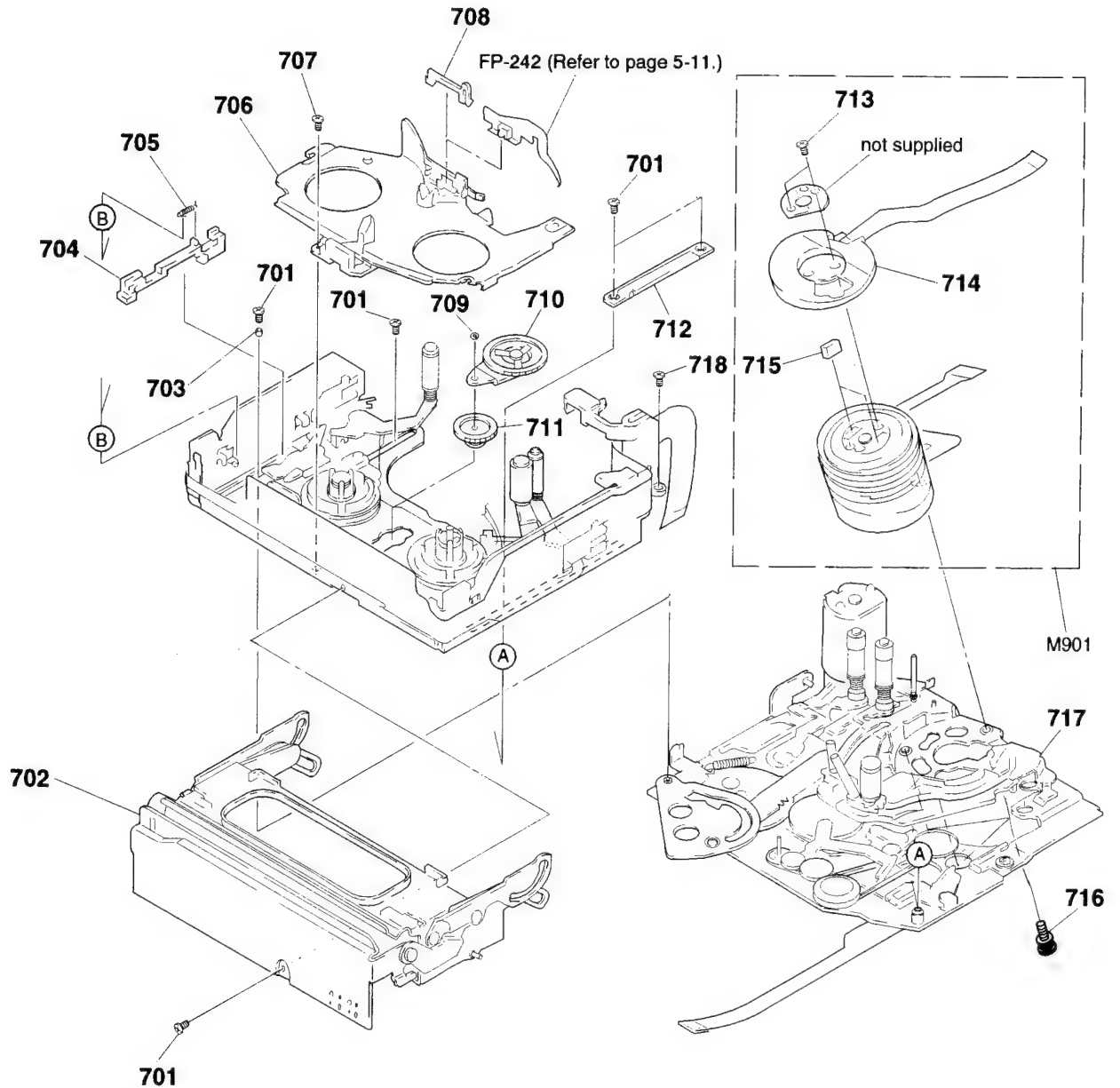
5-1-9. CCD AND ZOOM LENS ASSEMBLIES (VCL-5910WA)



※ Be sure to read carefully the "Note for replacement of the CCD imager" on page 4-9 when the No. 420 prism service assembly (incl. CCD imager) is replaced.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
401	3-964-032-01	LABEL, LENS		419	3-963-809-01	PLATE, LIGHT INTERCEPTION	
402	1-547-795-11	ZOOM LENS (VCL-5910WA)		420	A-7030-693-A	SERVICE ASSY (GN) S, PRISM (VX1000)	
403	3-709-011-01	RING ASSY, PROTECTION GLASS		420	A-7030-697-A	SERVICE ASSY (GP) S, PRISM (VX1000E)	
404	3-709-010-01	VAP ASSY		* 421	A-7072-224-A	CD-127 BOARD, COMPLETE	
405	3-709-013-01	RING ASSY, MF		422	3-947-268-11	SCREW (P TIGHT)(2X7.5), TAPPING, +B	
406	3-708-450-01	SCREW, PZ		423	X-3945-051-1	CASE ASSY, CCD INSULATOR	
407	3-709-012-01	RUBBER, MF		* 424	A-7056-435-A	LD-75 BOARD, COMPLETE	
408	3-709-016-01	LENS ASSY, ZOOM		425	1-656-396-11	FP-211 FLEXIBLE BOARD	
409	3-709-021-01	SHEET METAL, FITTING		426	1-500-294-11	CORE, FERRITE	
410	3-707-946-01	SCREW		427	1-500-290-11	BEAD, FERRITE	
411	3-709-020-01	FLEXIBLE, MAIN		428	3-966-374-01	PLATE, FIXED, F	
412	3-709-015-01	FLEXIBLE, VAP		429	3-963-933-01	EMBLEM, CCD	
413	3-709-019-01	SW, LEAF		M904	3-709-018-01	MOTOR UNIT, FOCUS	
414	3-709-043-01	SHEET, REFUSE PREVENTION		M905	3-709-017-01	MOTOR UNIT, ZOOM	
415	3-708-795-01	SCREW		M906	3-709-014-01	MOTOR UNIT, VAP LOCK	
* 416	A-7072-225-A	SE-35 BOARD, COMPLETE		SE401	1-810-725-71	SENSOR, ANGULAR VELOCITY (YAW)	
417	3-964-014-01	SCREW, TAPPING		SE402	1-810-725-81	SENSOR, ANGULAR VELOCITY (PITCH)	
418	3-963-810-01	RUBBER (M), SEAL					

5-1-10. CASSETTE COMPARTMENT AND DRUM ASSEMBLIES

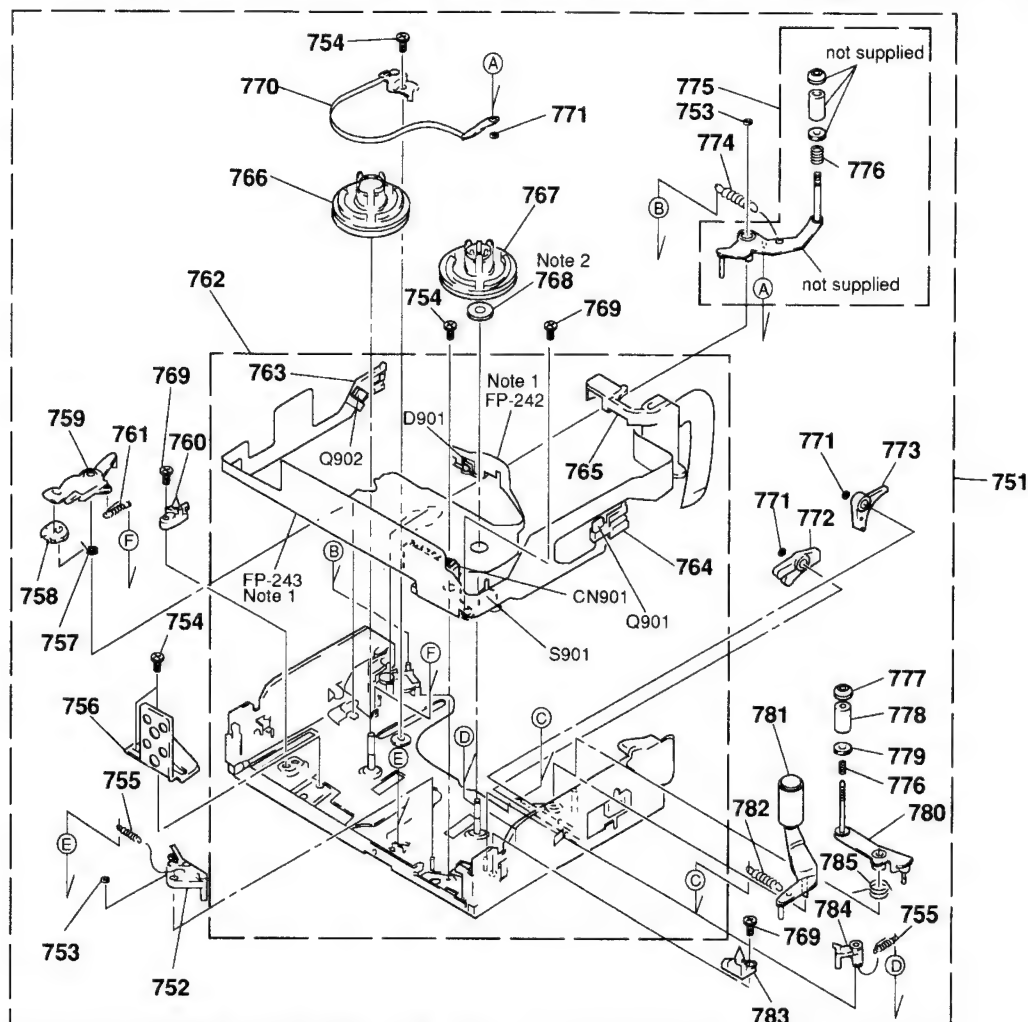


Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
701	3-728-103-11	SCREW (M1.4X1.6), SPECIAL HEAD		711	3-748-736-01	GEAR, RELAY	
702	X-3748-610-2	COMPARTMENT ASSY, CASSETTE		712	3-748-702-02	SLIDER, CAM	
703	3-748-703-01	COLLAR		713	3-703-816-74	SCREW (M1.4X4.5), SPECIAL HEAD	
704	3-748-700-02	SLIDER, LOCK		714	X-3944-897-2	FPC ASSY, MOTOR	
705	3-748-701-01	SPRING, TENSION		715	1-770-363-11	ELASTIC CONNECTOR	
706	X-3748-613-3	BASE ASSY, LED		716	A-7026-009-B	SCREW ASSY, DRUM FITTING	
707	3-704-197-21	SCREW (M1.4x2.5), LOCKING		717	A-7026-022-A	CHASSIS BLOCK ASSY, MECHANICAL	
708	3-748-683-01	HOLDER, LED		718	3-703-816-42	SCREW (M1.4x2.5), SPECIAL HEAD	
709	3-315-414-31	WASHER		M901	A-7044-001-A	DRUM ASSY (DEH-01A-R)	
710	X-3748-609-2	GOOSENECK ASSY					

5-1-11. LS CHASSIS ASSEMBLY

※ **Note 1:** About FP-242 and FP-243

The FP-242 and FP-243 flexible boards are installed to a chassis with a hot press, which are included in the Ref. No. 762 LS chassis (S) assembly. They are not supplied separately because the high precision for installation is needed.



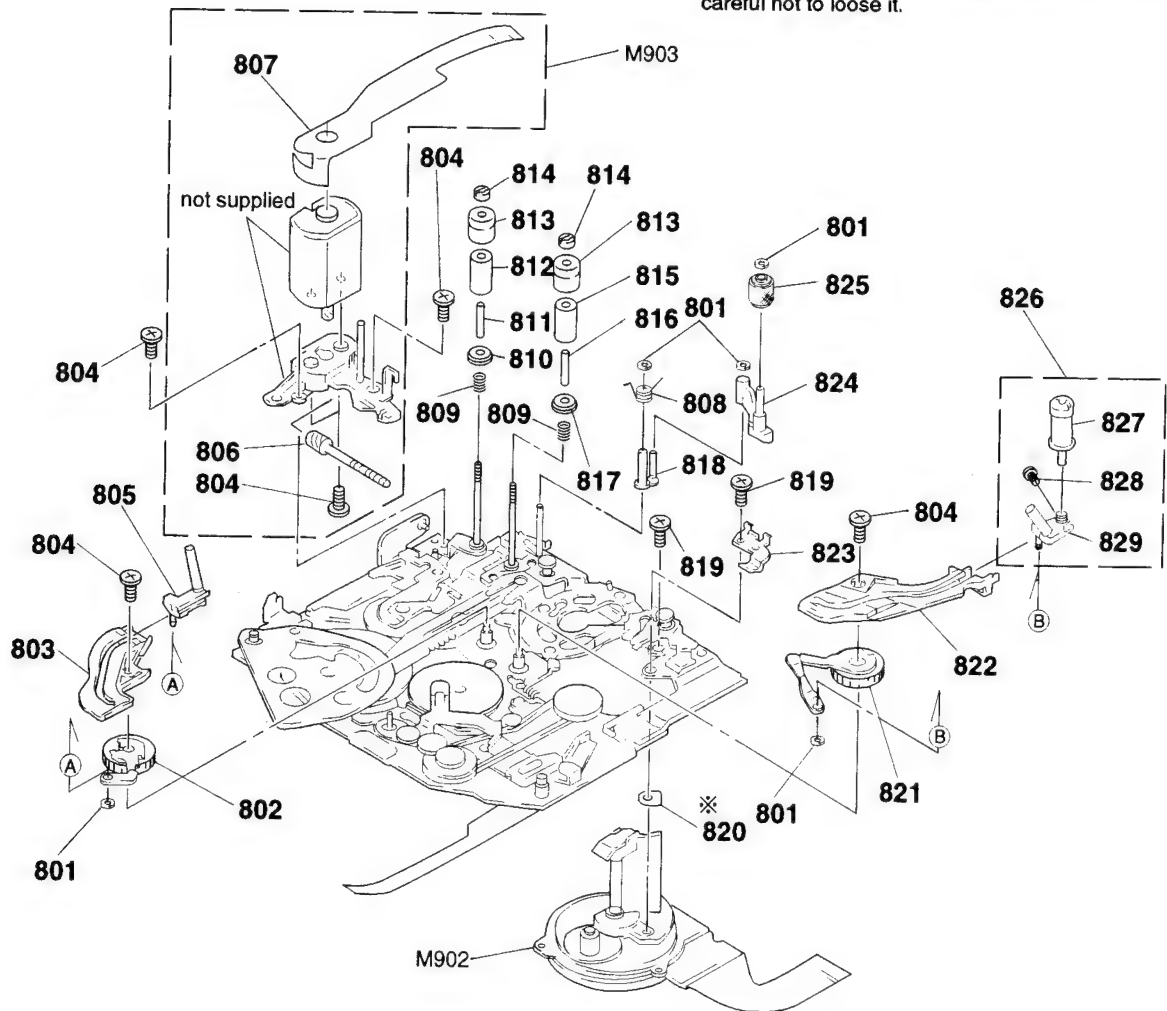
※ **Note 2:** Selecting the T washer

Select proper parts for the Ref. No. 768 T washer according to "Height adjustment for T reel table assembly" on page 23 in the "DV MECHANICAL ADJUSTMENT MANUAL I" (9-973-815-11).

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
751	A-7026-010-A	CHASSIS BLOCK ASSY, LS		770	X-3748-618-2	BAND ASSY, TENSION REGULATOR	
752	3-748-775-02	BRAKE, RVS		771	3-315-384-11	WASHER, STOPPER	
753	3-315-414-31	WASHER		772	3-748-680-01	FOLLOWER, SLIDER	
754	3-728-103-11	SCREW (M1.4X1.6), SPECIAL HEAD		773	3-748-679-01	LEVER, LOCK	
755	3-748-776-01	SPRING, TENSION		774	3-748-822-02	SPRING, EXTENSION	
756	3-748-681-01	PLATE, LS CAM		775	A-7026-020-B	ARM BLOCK ASSY, TENSION REGULATOR	
757	3-748-774-01	SPRING, TORSION		776	3-940-891-01	SPRING, COMPRESSION	
758	3-748-773-01	HARD, S		777	3-966-194-01	FLANGE, TG7 UPPER	
759	3-748-815-02	ARM, S BRAKE		778	3-748-777-02	TG7	
760	3-748-677-01	POSITIONING, S		779	3-964-614-01	FLANGE, TG7 LOWER	
761	3-968-656-01	SPRING, TENSION		780	X-3748-616-2	ARM ASSY, TG7	
762	A-7026-021-A	CHASSIS (S) ASSY, LS		781	X-3748-630-2	ARM ASSY, PINCH	
763	3-748-761-01	HOLDER (S), SENSOR		782	3-748-603-01	SPRING, TENSION	
764	3-748-762-01	HOLDER (T), SENSOR		783	3-748-678-01	POSITIONING, T	
765	3-748-763-01	HOLDER, FPC		784	3-748-778-02	BRAKE, T HARD	
766	X-3748-614-2	TABLE ASSY, REEL, S		785	3-748-675-01	SPRING, TORSION	
767	X-3748-615-2	TABLE ASSY, REEL, T		CN901	1-770-312-11	CONNECTOR 4P	
768	3-748-682-01	WASHER, T (t:0.1)	Note 2	D901	8-719-050-98	DIODE LN57, SO	
768	3-748-682-11	WASHER, T (t:0.25)		Q901	8-729-028-71	TRANSISTOR PN166, SO (TAPE TOP)	
768	3-748-682-21	WASHER, T (t:0.35)		Q902	8-729-028-71	TRANSISTOR PN166, SO (TAPE END)	
769	3-703-816-42	SCREW (M1.4x2.5), SPECIAL HEAD		S901	1-762-351-11	SWITCH, PUSH (1 KEY) (REC PROOF)	

5-1-12. MECHANISM CHASSIS ASSEMBLY (1)

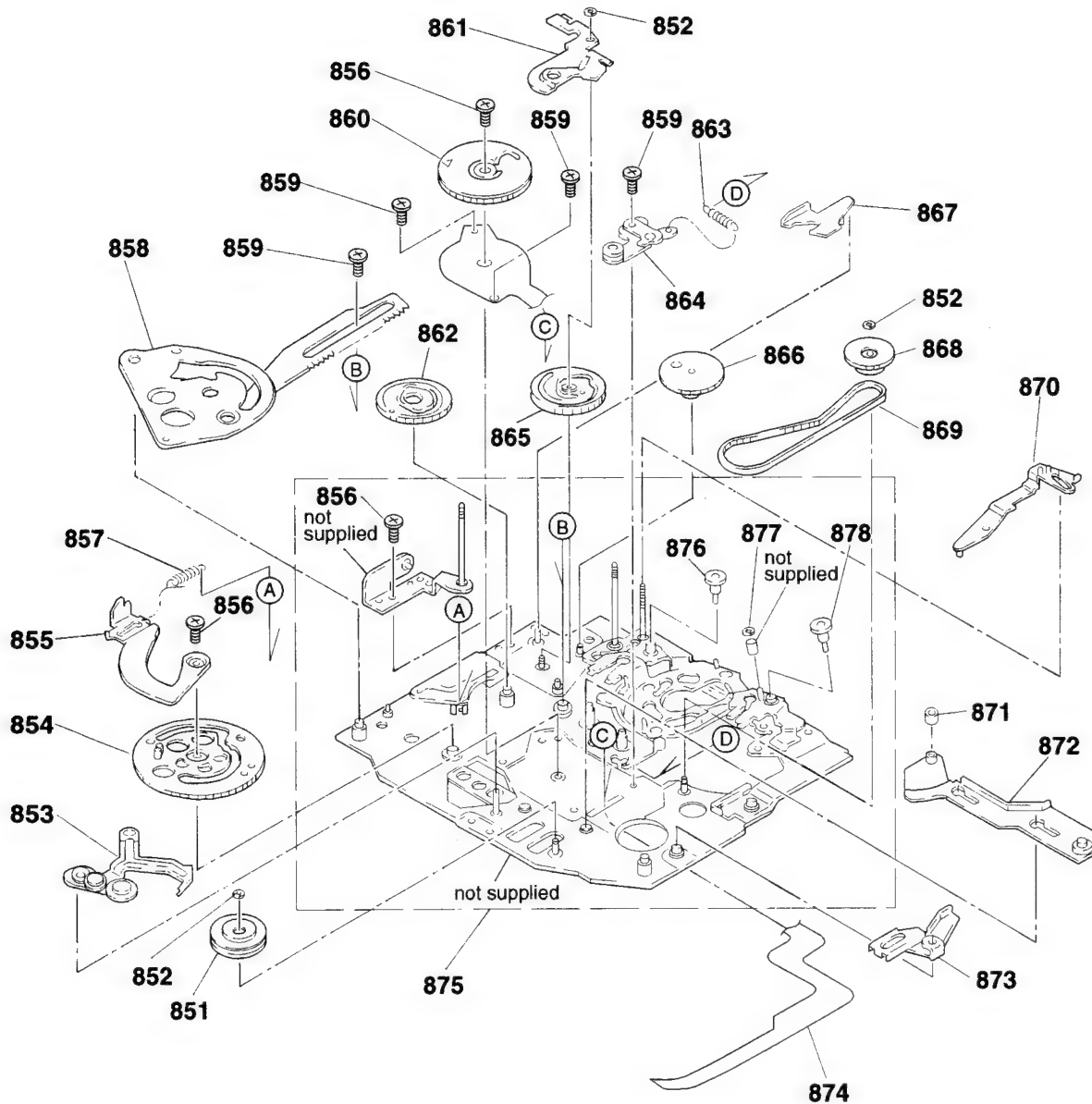
※ **Note:** Be sure to remember the installed position (one of two positions), direction and thickness of the Ref. No. 820 (head spacer) when the M902 (capstan motor) is removed. Refer to "3-9. Capstan motor" on page 15 in the DV MECHANICAL ADJUSTMENT MANUAL I (9-973-815-11) for details. The thickness of head spacer is normally 100 μ m. If it is lost, two 50 μ m head spacers will be needed. Be careful not to lose it.



Ref. No.	Part No.	Description
801	3-315-414-31	WASHER
802	X-3748-623-1	GL (S) ASSY
803	3-748-600-02	RAIL (S)
804	3-703-816-42	SCREW (M1.4x2.5), SPECIAL HEAD
805	X-3748-622-2	COASTER (S) ASSY
806	X-3945-435-1	SHAFT (12) ASSY, WORM
807	1-657-756-11	FP-347 FLEXIBLE BOARD
808	3-748-742-02	SPRING, TORSION
809	3-966-107-01	SPRING, COMPRESSION
810	3-966-105-01	FLANGE, TG1 LOWER
811	3-966-100-01	SLEEVE, TG1/3
812	3-966-099-01	ROLLER, TG1/3
813	3-966-102-01	FLANGE, TG1/3 UPPER
814	3-966-101-01	NUT, TG1/3
815	3-966-099-11	ROLLER, TG1/3
816	3-966-100-11	SLEEVE, TG1/3

Remark	Ref. No.	Part No.	Description	Remark
	817	3-966-106-01	FLANGE, TG3 LOWER	
	818	X-3748-629-3	ARM ASSY, HC	
	819	3-728-103-11	SCREW (M1.4X1.6), SPECIAL HEAD	
	820	3-727-843-16	SPACER, HEAD (CORRECTIVE SPACER) (t=50 μ m)	
	821	X-3748-624-1	GL (T) ASSY	
	822	3-748-601-02	RAIL (T)	
	823	3-964-430-01	SPRING, LS RETAINER	
	824	X-3748-628-2	SLIDE ASSY, HC	
	825	A-7026-006-A	ROLLER ASSY, HC	
	826	A-7026-003-A	COASTER (T) BLOCK ASSY	
	827	X-3748-626-3	TG5 ASSY	
	828	3-965-211-01	SCREW (M1)	
	829	X-3748-625-3	COASTER (T) ASSY	
	M902	8-835-524-01	MOTOR, DC SCD-0101A (CAPSTAN)	
	M903	A-7026-007-A	MOTOR ASSY, LM (LOADING)	

5-1-13. MECHANISM CHASSIS ASSEMBLY (2)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
851	X-3945-640-1	PULLEY ASSY, RELAY		866	3-748-741-03	GEAR, No. 1	
852	3-315-414-31	WASHER		867	3-748-731-02	ARM, POSITION	
853	X-3748-600-1	ARM ASSY, COMPUSSION		868	X-3945-639-1	PULLEY ASSY, CONVERSION	
854	X-3748-605-1	CAM (S) ASSY		869	3-748-734-01	BELT, RELAY	
855	3-748-743-02	ARM, EJ		870	X-3748-607-2	STOPPER ASSY, RVS	
856	3-703-816-42	SCREW (M1.4x2.5), SPECIAL HEAD		871	3-728-109-01	ROLLER, LS	
857	3-748-744-01	SPRING, TENSION		872	3-748-647-01	SLIDER, MODE	
858	X-3748-602-2	ARM ASSY, LS		873	3-748-733-01	ARM, PINCH RELEASE	
859	3-728-103-11	SCREW (M1.4x1.6), SPECIAL HEAD		874	1-656-250-12	FP-245 FLEXIBLE BOARD	
860	X-3748-604-1	CAM ASSY, MODE		875	A-7026-023-B	CHASSIS SUB BLOCK ASSY	
861	3-748-739-02	RETAINER, GEAR		876	3-748-620-02	SCREW, ADJUSTMENT	
862	3-748-740-03	GEAR, No. 3		877	4-943-288-01	WASHER	
863	3-748-602-02	SPRING, TENSION		878	3-748-605-02	SCREW, ADJUSTMENT	
864	X-3748-627-1	ARM ASSY, ADJUSTMENT					
865	3-748-738-02	GEAR, No. 2					

5-2. ELECTRICAL PARTS LIST

NOTE:

The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
All resistors are in ohms
METAL: Metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F: nonflammable

- SEMICONDUCTORS
In each case, u: μ , for example:
uA...: μ A..., uPA...: μ PA..., uPB...: μ PB...,
uPC...: μ PC..., uPD...: μ PD...
- CAPACITORS
uF: μ F
- COILS
uH: μ H
- Canadian model is abbreviated as CND.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	A-7072-228-A	AK-11 BOARD, COMPLETE ***** (Ref. No. 8,000 Series)		C007	1-164-217-11	CERAMIC CHIP 150PF 5%	50V
		< CONNECTOR >		C008	1-135-259-11	TANTAL. CHIP 10uF 20%	6.3V
CN401	1-764-520-11	CONNECTOR, FFC/FPC (ZIF) 11P		C009	1-135-259-11	TANTAL. CHIP 10uF 20%	6.3V
CN402	1-764-680-21	CONNECTOR, FFC/FPC (ZIF) 8P		C010	1-162-921-11	CERAMIC CHIP 33PF 5%	50V
CN403	1-569-806-21	CONNECTOR, FPC5P		C011	1-162-928-11	CERAMIC CHIP 120PF 5%	50V
		< DIODE >		C012	1-162-966-11	CERAMIC CHIP 0.0022uF 10%	50V
D400	8-719-420-14	DIODE MA8082-M		C013	1-164-360-11	CERAMIC CHIP 0.1uF	16V
D402	8-719-420-14	DIODE MA8082-M		C014	1-164-360-11	CERAMIC CHIP 0.1uF	16V
D403	8-719-420-14	DIODE MA8082-M		C015	1-162-926-11	CERAMIC CHIP 82PF 5%	50V
D404	8-719-420-14	DIODE MA8082-M		C016	1-164-217-11	CERAMIC CHIP 150PF 5%	50V
D405	8-719-404-49	DIODE MA111		C017	1-135-259-11	TANTAL. CHIP 10uF 20%	6.3V
		< RESISTOR >		C018	1-162-926-11	CERAMIC CHIP 82PF 5%	50V
R400	1-216-828-11	METAL CHIP 3.9K 5% 1/16W		C019	1-135-259-11	TANTAL. CHIP 10uF 20%	6.3V
R401	1-216-832-11	METAL CHIP 8.2K 5% 1/16W		C020	1-162-966-11	CERAMIC CHIP 0.0022uF 10%	50V
R402	1-216-838-11	METAL CHIP 27K 5% 1/16W		C021	1-135-259-11	TANTAL. CHIP 10uF 20%	6.3V
		< SWITCH >		C022	1-162-921-11	CERAMIC CHIP 33PF 5%	50V
S400	1-572-921-31	SWITCH, KEY BOARD (EXPOSURE)		C023	1-104-847-11	TANTAL. CHIP 22uF 20%	4V
		< BUZZER >		C025	1-135-259-11	TANTAL. CHIP 10uF 20%	6.3V
SP400	1-529-107-11	BUZZER, PIEZOELECTRIC		C026	1-162-928-11	CERAMIC CHIP 120PF 5%	50V
		< FLEXIBLE BOARD >		C027	1-135-091-91	TANTAL. CHIP 1uF 20%	16V
W400	1-656-387-11	FP-200 FLEXIBLE BOARD		C028	1-162-926-11	CERAMIC CHIP 82PF 5%	50V
W401	1-656-388-11	FP-201 FLEXIBLE BOARD		C029	1-135-259-11	TANTAL. CHIP 10uF 20%	6.3V
				C030	1-135-259-11	TANTAL. CHIP 10uF 20%	6.3V
				C031	1-164-360-11	CERAMIC CHIP 0.1uF	16V
				C032	1-135-259-11	TANTAL. CHIP 10uF 20%	6.3V
				C033	1-135-259-11	TANTAL. CHIP 10uF 20%	6.3V
				C034	1-135-190-21	TANTAL. CHIP 0.1uF 20%	20V
				C035	1-135-259-11	TANTAL. CHIP 10uF 20%	6.3V
				C036	1-164-217-11	CERAMIC CHIP 150PF 5%	50V
				C037	1-164-360-11	CERAMIC CHIP 0.1uF	16V
				C038	1-135-259-11	TANTAL. CHIP 10uF 20%	6.3V
				C040	1-164-217-11	CERAMIC CHIP 150PF 5%	50V
				C041	1-164-360-11	CERAMIC CHIP 0.1uF	16V
				C042	1-162-926-11	CERAMIC CHIP 82PF 5%	50V
				C047	1-164-360-11	CERAMIC CHIP 0.1uF	16V
				C048	1-135-259-11	TANTAL. CHIP 10uF 20%	6.3V
				C049	1-164-360-11	CERAMIC CHIP 0.1uF	16V
				C050	1-135-259-11	TANTAL. CHIP 10uF 20%	6.3V
				C051	1-135-259-11	TANTAL. CHIP 10uF 20%	6.3V
				C052	1-164-360-11	CERAMIC CHIP 0.1uF	16V
				C053	1-135-259-11	TANTAL. CHIP 10uF 20%	6.3V
*	A-7066-433-A	AU-179 BOARD, COMPLETE ***** (Ref. No. 7,000 Series)					
		< CAPACITOR >					
C001	1-135-190-21	TANTAL. CHIP 0.1uF 20%	20V				
C002	1-135-259-11	TANTAL. CHIP 10uF 20%	6.3V				
C003	1-164-360-11	CERAMIC CHIP 0.1uF	16V				
C004	1-135-091-91	TANTAL. CHIP 1uF 20%	16V				

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C054	1-164-360-11	CERAMIC CHIP	0.1uF 16V	C131	1-164-360-11	CERAMIC CHIP	0.1uF 16V
C055	1-164-360-11	CERAMIC CHIP	0.1uF 16V	C132	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V
C056	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V	C133	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V
C058	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V	C134	1-135-190-21	TANTAL. CHIP	0.1uF 20% 20V
C059	1-164-360-11	CERAMIC CHIP	0.1uF 16V	C135	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V
C060	1-104-752-11	TANTAL. CHIP	33uF 20% 6.3V	C136	1-164-360-11	CERAMIC CHIP	0.1uF 16V
C061	1-135-072-21	TANTALUM CHIP	0.22uF 10% 35V	C150	1-135-091-91	TANTAL. CHIP	1uF 20% 16V
C062	1-135-181-21	TANTALUM CHIP	4.7uF 20% 6.3V	C151	1-164-360-11	CERAMIC CHIP	0.1uF 16V
C063	1-135-181-21	TANTALUM CHIP	4.7uF 20% 6.3V	C152	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V
C064	1-135-181-21	TANTALUM CHIP	4.7uF 20% 6.3V	C153	1-164-360-11	CERAMIC CHIP	0.1uF 16V
C065	1-162-925-11	CERAMIC CHIP	68PF 5% 50V	C154	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V
C066	1-164-360-11	CERAMIC CHIP	0.1uF 16V	C155	1-135-091-91	TANTAL. CHIP	1uF 20% 16V
C068	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	C157	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V
C069	1-162-925-11	CERAMIC CHIP	68PF 5% 50V	C158	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V
C070	1-135-181-21	TANTALUM CHIP	4.7uF 20% 6.3V	C191	1-135-091-91	TANTAL. CHIP	1uF 20% 16V
C071	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V	C192	1-135-091-91	TANTAL. CHIP	1uF 20% 16V
C072	1-164-360-11	CERAMIC CHIP	0.1uF 16V	< CONNECTOR >			
C073	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V	* CN001	1-770-449-21	CONNECTOR, BOARD T1 BOARD 70P	
C074	1-164-360-11	CERAMIC CHIP	0.1uF 16V	CN002	1-766-350-21	CONNECTOR, FFC/FPC 20P	
C075	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V	< DIODE >			
C076	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	D001	8-719-027-48	DIODE MA142WA	
C077	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V	D002	8-719-404-49	DIODE MA111	
C078	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V	D003	8-719-404-49	DIODE MA111	
C079	1-164-360-11	CERAMIC CHIP	0.1uF 16V	D004	8-719-027-50	DIODE MA142WK	
C080	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	D005	8-719-404-16	DIODE MA713	
C081	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	D006	8-719-404-16	DIODE MA713	
C082	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V	< IC >			
C083	1-104-848-11	TANTAL. CHIP	100uF 20% 4V	IC001	8-759-089-61	IC TC74HC4052AFS	
C084	1-162-925-11	CERAMIC CHIP	68PF 5% 50V	IC002	8-759-111-56	IC uPC4572G2	
C085	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	IC003	8-759-327-29	IC M62409FP-700D	
C086	1-162-925-11	CERAMIC CHIP	68PF 5% 50V	IC004	8-759-111-56	IC uPC4572G2	
C087	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	IC006	8-759-326-98	IC AK4503-VF-E2	
C088	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V	IC007	8-759-252-90	IC TLV23621PW-ELM1500	
C089	1-104-848-11	TANTAL. CHIP	100uF 20% 4V	IC008	8-759-058-41	IC NJM3416V	
C090	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V	IC009	8-759-058-41	IC NJM3416V	
C091	1-135-091-91	TANTAL. CHIP	1uF 20% 16V	IC010	8-759-327-07	IC TC51V4256BFTL-80	
C092	1-135-091-91	TANTAL. CHIP	1uF 20% 16V	IC011	8-752-374-97	IC CXD2705AR	
C101	1-135-190-21	TANTAL. CHIP	0.1uF 20% 20V	IC012	8-759-111-56	IC uPC4572G2	
C102	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V	IC013	8-759-327-29	IC M62409FP-700D	
C103	1-164-360-11	CERAMIC CHIP	0.1uF 16V	IC014	8-759-111-56	IC uPC4572G2	
C104	1-135-091-91	TANTAL. CHIP	1uF 20% 16V	IC015	8-759-710-79	IC NJM2107F	
C110	1-162-921-11	CERAMIC CHIP	33PF 5% 50V	IC016	8-759-079-53	IC TC74VHCT08FS(EL)	
C117	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V	< COIL >			
C119	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V	L002	1-412-029-11	INDUCTOR CHIP 10uH	
C121	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V	L003	1-412-029-11	INDUCTOR CHIP 10uH	
C122	1-162-921-11	CERAMIC CHIP	33PF 5% 50V	L004	1-412-029-11	INDUCTOR CHIP 10uH	
C123	1-104-847-11	TANTAL. CHIP	22uF 20% 4V				
C125	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V				
C127	1-135-091-91	TANTAL. CHIP	1uF 20% 16V				
C130	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V				

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
L005	1-412-029-11	INDUCTOR CHIP 10uH		R027	1-218-879-11	METAL CHIP 22K 0.50% 1/16W	
L006	1-412-029-11	INDUCTOR CHIP 10uH		R028	1-216-857-11	METAL CHIP 1M 5% 1/16W	
L007	1-412-029-11	INDUCTOR CHIP 10uH		R029	1-218-859-11	METAL CHIP 3.3K 0.50% 1/16W	
L008	1-412-029-11	INDUCTOR CHIP 10uH		R030	1-218-859-11	METAL CHIP 3.3K 0.50% 1/16W	
L009	1-412-029-11	INDUCTOR CHIP 10uH		R031	1-218-879-11	METAL CHIP 22K 0.50% 1/16W	
L107	1-412-029-11	INDUCTOR CHIP 10uH		R032	1-218-879-11	METAL CHIP 22K 0.50% 1/16W	
L109	1-412-029-11	INDUCTOR CHIP 10uH		R033	1-218-883-11	METAL CHIP 33K 0.50% 1/16W	
< TRANSISTOR >				R034	1-218-883-11	METAL CHIP 33K 0.50% 1/16W	
Q001	8-729-420-12	TRANSISTOR XN4213		R035	1-218-883-11	METAL CHIP 33K 0.50% 1/16W	
Q003	8-729-420-20	TRANSISTOR XN4312		R036	1-216-841-11	METAL CHIP 47K 5% 1/16W	
Q004	8-729-905-23	TRANSISTOR 2SA1576-R		R038	1-218-883-11	METAL CHIP 33K 0.50% 1/16W	
Q005	8-729-402-42	TRANSISTOR UN5213		R039	1-218-891-11	METAL CHIP 68K 0.50% 1/16W	
Q006	8-729-905-23	TRANSISTOR 2SA1576-R		R042	1-218-891-11	METAL CHIP 68K 0.50% 1/16W	
Q007	8-729-905-23	TRANSISTOR 2SA1576-R		R044	1-216-837-11	METAL CHIP 22K 5% 1/16W	
Q008	8-729-420-20	TRANSISTOR XN4312		R045	1-216-837-11	METAL CHIP 22K 5% 1/16W	
Q009	8-729-402-81	TRANSISTOR XN4501		R046	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
Q010	8-729-402-81	TRANSISTOR XN4501		R047	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
Q011	8-729-420-20	TRANSISTOR XN4312		R048	1-216-864-11	METAL CHIP 0 5% 1/16W	
Q012	8-729-422-54	TRANSISTOR XN4215		R049	1-216-864-11	METAL CHIP 0 5% 1/16W	
Q013	8-729-422-54	TRANSISTOR XN4215		R050	1-216-864-11	METAL CHIP 0 5% 1/16W	
Q014	8-729-402-81	TRANSISTOR XN4501		R051	1-216-841-11	METAL CHIP 47K 5% 1/16W	
Q015	8-729-420-20	TRANSISTOR XN4312		R052	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
Q022	8-729-420-50	TRANSISTOR UN5215		R053	1-216-813-11	METAL CHIP 220 5% 1/16W	
Q023	8-729-420-50	TRANSISTOR UN5215		R054	1-216-864-11	METAL CHIP 0 5% 1/16W	
Q122	8-729-420-50	TRANSISTOR UN5215		R055	1-216-864-11	METAL CHIP 0 5% 1/16W	
Q123	8-729-420-50	TRANSISTOR UN5215		R056	1-216-841-11	METAL CHIP 47K 5% 1/16W	
< RESISTOR >				R057	1-216-864-11	METAL CHIP 0 5% 1/16W	
R001	1-216-845-11	METAL CHIP 100K 5% 1/16W		R058	1-216-864-11	METAL CHIP 0 5% 1/16W	
R002	1-216-857-11	METAL CHIP 1M 5% 1/16W		R059	1-216-864-11	METAL CHIP 0 5% 1/16W	
R004	1-216-857-11	METAL CHIP 1M 5% 1/16W		R060	1-216-813-11	METAL CHIP 220 5% 1/16W	
R005	1-216-837-11	METAL CHIP 22K 5% 1/16W		R061	1-216-864-11	METAL CHIP 0 5% 1/16W	
R006	1-216-837-11	METAL CHIP 22K 5% 1/16W		R062	1-218-873-11	METAL CHIP 12K 0.50% 1/16W	
R009	1-218-897-11	METAL CHIP 120K 0.50% 1/16W		R063	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R010	1-218-879-11	METAL CHIP 22K 0.50% 1/16W		R064	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R011	1-218-889-11	METAL CHIP 56K 0.50% 1/16W		R066	1-216-864-11	METAL CHIP 0 5% 1/16W	
R012	1-218-879-11	METAL CHIP 22K 0.50% 1/16W		R067	1-216-864-11	METAL CHIP 0 5% 1/16W	
R013	1-218-883-11	METAL CHIP 33K 0.50% 1/16W		R068	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R014	1-218-891-11	METAL CHIP 68K 0.50% 1/16W		R069	1-216-864-11	METAL CHIP 0 5% 1/16W	
R015	1-218-883-11	METAL CHIP 33K 0.50% 1/16W		R070	1-216-864-11	METAL CHIP 0 5% 1/16W	
R016	1-216-797-11	METAL CHIP 10 5% 1/16W		R071	1-216-864-11	METAL CHIP 0 5% 1/16W	
R017	1-218-879-11	METAL CHIP 22K 0.50% 1/16W		R072	1-216-864-11	METAL CHIP 0 5% 1/16W	
R018	1-218-879-11	METAL CHIP 22K 0.50% 1/16W		R073	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R019	1-218-891-11	METAL CHIP 68K 0.50% 1/16W		R074	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R021	1-216-817-11	METAL CHIP 470 5% 1/16W		R075	1-216-864-11	METAL CHIP 0 5% 1/16W	
R023	1-216-817-11	METAL CHIP 470 5% 1/16W		R076	1-216-864-11	METAL CHIP 0 5% 1/16W	
R024	1-218-897-11	METAL CHIP 120K 0.50% 1/16W		R077	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R025	1-218-879-11	METAL CHIP 22K 0.50% 1/16W		R078	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R026	1-218-889-11	METAL CHIP 56K 0.50% 1/16W		R079	1-218-871-11	METAL CHIP 10K 0.50% 1/16W	
				R080	1-218-871-11	METAL CHIP 10K 0.50% 1/16W	
				R081	1-218-873-11	METAL CHIP 12K 0.50% 1/16W	

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark			
R082	1-216-821-11	METAL CHIP	1K	5%	1/16W	< COMPOSITION CIRCUIT BLOCK >						
R083	1-216-821-11	METAL CHIP	1K	5%	1/16W	RB001	1-236-436-11	NETWORK, RES 100K				
R084	1-216-841-11	METAL CHIP	47K	5%	1/16W	RB002	1-236-412-11	NETWORK, RES 1.0K				
R085	1-216-841-11	METAL CHIP	47K	5%	1/16W	RB003	1-236-412-11	NETWORK, RES 1.0K				
R086	1-216-841-11	METAL CHIP	47K	5%	1/16W	RB004	1-236-412-11	NETWORK, RES 1.0K				
R087	1-216-841-11	METAL CHIP	47K	5%	1/16W							
R088	1-216-845-11	METAL CHIP	100K	5%	1/16W							
R089	1-218-877-11	METAL CHIP	18K	0.50%	1/16W							
R090	1-218-871-11	METAL CHIP	10K	0.50%	1/16W							
R091	1-218-873-11	METAL CHIP	12K	0.50%	1/16W							
R092	1-216-803-11	METAL CHIP	33	5%	1/16W							
R093	1-216-803-11	METAL CHIP	33	5%	1/16W							
R094	1-216-849-11	METAL CHIP	220K	5%	1/16W							
R095	1-216-833-11	METAL CHIP	10K	5%	1/16W							
R096	1-218-877-11	METAL CHIP	18K	0.50%	1/16W							
R097	1-218-871-11	METAL CHIP	10K	0.50%	1/16W							
R098	1-216-849-11	METAL CHIP	220K	5%	1/16W							
R099	1-218-873-11	METAL CHIP	12K	0.50%	1/16W							
R100	1-216-803-11	METAL CHIP	33	5%	1/16W							
R101	1-216-803-11	METAL CHIP	33	5%	1/16W							
R102	1-216-833-11	METAL CHIP	10K	5%	1/16W							
R109	1-218-897-11	METAL CHIP	120K	0.50%	1/16W							
R121	1-216-817-11	METAL CHIP	470	5%	1/16W							
R123	1-216-817-11	METAL CHIP	470	5%	1/16W							
R124	1-218-897-11	METAL CHIP	120K	0.50%	1/16W							
R128	1-216-857-11	METAL CHIP	1M	5%	1/16W							
R129	1-218-859-11	METAL CHIP	3.3K	0.50%	1/16W							
R130	1-218-859-11	METAL CHIP	3.3K	0.50%	1/16W							
R131	1-216-841-11	METAL CHIP	47K	5%	1/16W							
R132	1-216-841-11	METAL CHIP	47K	5%	1/16W							
R133	1-216-841-11	METAL CHIP	47K	5%	1/16W							
R134	1-218-883-11	METAL CHIP	33K	0.50%	1/16W							
R135	1-218-883-11	METAL CHIP	33K	0.50%	1/16W							
R136	1-216-841-11	METAL CHIP	47K	5%	1/16W							
R150	1-218-871-11	METAL CHIP	10K	0.50%	1/16W							
R151	1-218-887-11	METAL CHIP	47K	0.50%	1/16W							
R152	1-218-887-11	METAL CHIP	47K	0.50%	1/16W							
R153	1-218-871-11	METAL CHIP	10K	0.50%	1/16W							
R154	1-218-887-11	METAL CHIP	47K	0.50%	1/16W							
R155	1-218-887-11	METAL CHIP	47K	0.50%	1/16W							
R156	1-218-871-11	METAL CHIP	10K	0.50%	1/16W							
R157	1-218-871-11	METAL CHIP	10K	0.50%	1/16W							
R158	1-218-887-11	METAL CHIP	47K	0.50%	1/16W							
R159	1-218-887-11	METAL CHIP	47K	0.50%	1/16W							
R160	1-216-845-11	METAL CHIP	100K	5%	1/16W							
R161	1-216-845-11	METAL CHIP	100K	5%	1/16W							
R162	1-216-845-11	METAL CHIP	100K	5%	1/16W							
R163	1-216-845-11	METAL CHIP	100K	5%	1/16W							

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
C046	1-135-201-11	TANTALUM CHIP	10uF	20%	4V	C099	1-135-151-21	TANTALUM CHIP	4.7uF	20%	4V
C047	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C100	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C048	1-135-091-91	TANTAL. CHIP	1uF	20%	16V	C101	1-135-151-21	TANTALUM CHIP	4.7uF	20%	4V
C049	1-135-091-91	TANTAL. CHIP	1uF	20%	16V	C102	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C050	1-162-913-11	CERAMIC CHIP	8PF	0.5PF	50V	C103	1-164-346-11	CERAMIC CHIP	1uF		16V
C051	1-135-091-91	TANTAL. CHIP	1uF	20%	16V	C104	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C052	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C105	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C053	1-135-091-91	TANTAL. CHIP	1uF	20%	16V	C106	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C054	1-135-091-91	TANTAL. CHIP	1uF	20%	16V	C107	1-164-346-11	CERAMIC CHIP	1uF		16V
C055	1-135-091-91	TANTAL. CHIP	1uF	20%	16V	C108	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C056	1-110-569-11	TANTAL. CHIP	47uF	20%	6.3V	C109	1-104-847-11	TANTAL. CHIP	22uF	20%	4V
C057	1-135-201-11	TANTALUM CHIP	10uF	20%	4V	C110	1-164-346-11	CERAMIC CHIP	1uF		16V
C058	1-135-201-11	TANTALUM CHIP	10uF	20%	4V	C111	1-164-346-11	CERAMIC CHIP	1uF		16V
C059	1-162-974-11	CERAMIC CHIP	0.01uF		50V	C112	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C060	1-164-360-11	CERAMIC CHIP	0.1uF		16V	C113	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C061	1-164-346-11	CERAMIC CHIP	1uF		16V	C114	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C062	1-110-569-11	TANTAL. CHIP	47uF	20%	6.3V	C117	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C063	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V	C121	1-110-569-11	TANTAL. CHIP	47uF	20%	6.3V
C064	1-162-974-11	CERAMIC CHIP	0.01uF		50V	C122	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C066	1-162-974-11	CERAMIC CHIP	0.01uF		50V	C123	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C067	1-135-070-00	TANTALUM CHIP	0.1uF	10%	35V	C124	1-164-346-11	CERAMIC CHIP	1uF		16V
C068	1-135-070-00	TANTALUM CHIP	0.1uF	10%	35V	C125	1-164-346-11	CERAMIC CHIP	1uF		16V
C069	1-135-070-00	TANTALUM CHIP	0.1uF	10%	35V	C126	1-164-346-11	CERAMIC CHIP	1uF		16V
C070	1-164-346-11	CERAMIC CHIP	1uF		16V	C127	1-164-346-11	CERAMIC CHIP	1uF		16V
C071	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V	C128	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C072	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V	C129	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C073	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V	C130	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C075	1-110-569-11	TANTAL. CHIP	47uF	20%	6.3V	C131	1-135-151-21	TANTALUM CHIP	4.7uF	20%	4V
C076	1-162-916-11	CERAMIC CHIP	12PF	5%	50V	C132	1-135-151-21	TANTALUM CHIP	4.7uF	20%	4V
C077	1-110-569-11	TANTAL. CHIP	47uF	20%	6.3V	C133	1-135-151-21	TANTALUM CHIP	4.7uF	20%	4V
C078	1-110-569-11	TANTAL. CHIP	47uF	20%	6.3V	C199	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C079	1-110-569-11	TANTAL. CHIP	47uF	20%	6.3V	C203	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C080	1-110-569-11	TANTAL. CHIP	47uF	20%	6.3V	C204	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C081	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C205	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C082	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C206	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C083	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C208	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C084	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V	C209	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C085	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V	C210	1-109-996-11	CERAMIC CHIP	1uF		6.3V
C086	1-162-920-11	CERAMIC CHIP	27PF	5%	50V	C211	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C087	1-162-920-11	CERAMIC CHIP	27PF	5%	50V	C213	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C088	1-162-920-11	CERAMIC CHIP	27PF	5%	50V	C214	1-162-916-11	CERAMIC CHIP	12PF	5%	50V
C089	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V	C215	1-162-906-11	CERAMIC CHIP	1.5PF	0.25PF	50V
C090	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V	C216	1-135-179-21	TANTAL. CHIP	2.2uF	20%	16V
C091	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V	C217	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C092	1-164-360-11	CERAMIC CHIP	0.1uF		16V	C218	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C093	1-164-360-11	CERAMIC CHIP	0.1uF		16V	C219	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C094	1-164-360-11	CERAMIC CHIP	0.1uF		16V	C221	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C095	1-162-974-11	CERAMIC CHIP	0.01uF		50V	C225	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C096	1-135-151-21	TANTALUM CHIP	4.7uF	20%	4V						
C098	1-162-974-11	CERAMIC CHIP	0.01uF		50V						

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
C226	1-162-974-11	CERAMIC CHIP	0.01uF		50V	C311	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C227	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V	C312	1-162-925-11	CERAMIC CHIP	68PF	5%	50V
C228	1-162-974-11	CERAMIC CHIP	0.01uF		50V	C313	1-164-346-11	CERAMIC CHIP	1uF		16V
C229	1-109-996-11	CERAMIC CHIP	1uF		6.3V	C314	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C231	1-109-996-11	CERAMIC CHIP	1uF		6.3V	C315	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C233	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V	C316	1-164-346-11	CERAMIC CHIP	1uF		16V
C235	1-162-974-11	CERAMIC CHIP	0.01uF		50V	C317	1-164-346-11	CERAMIC CHIP	1uF		16V
C237	1-162-974-11	CERAMIC CHIP	0.01uF		50V	C318	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C238	1-135-091-91	TANTAL. CHIP	1uF	20%	16V	C319	1-164-346-11	CERAMIC CHIP	1uF		16V
C244	1-164-315-11	CERAMIC CHIP	470PF	5%	50V	C320	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C245	1-162-908-11	CERAMIC CHIP	3PF	0.25PF	50V	C321	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C246	1-162-920-11	CERAMIC CHIP	27PF	5%	50V	C322	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C247	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	C323	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C248	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	C324	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C249	1-135-145-11	TANTALUM CHIP	0.47uF	10%	35V	C325	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C250	1-135-145-11	TANTALUM CHIP	0.47uF	10%	35V	C326	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C251	1-109-996-11	CERAMIC CHIP	1uF		6.3V	C327	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C253	1-109-996-11	CERAMIC CHIP	1uF		6.3V	C328	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C255	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	C329	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C257	1-109-996-11	CERAMIC CHIP	1uF		6.3V	C330	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C258	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V	C331	1-164-346-11	CERAMIC CHIP	1uF		16V
C259	1-164-346-11	CERAMIC CHIP	1uF		16V	C332	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C261	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C333	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C262	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C334	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C263	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C335	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C264	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C336	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C265	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C337	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C266	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C338	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C267	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C339	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C268	1-162-974-11	CERAMIC CHIP	0.01uF		50V	C340	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C290	1-162-974-11	CERAMIC CHIP	0.01uF		50V	C341	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C291	1-162-974-11	CERAMIC CHIP	0.01uF		50V	C342	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C292	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V	C343	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C293	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V	C344	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C294	1-164-360-11	CERAMIC CHIP	0.1uF		16V	C345	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C295	1-162-974-11	CERAMIC CHIP	0.01uF		50V	C347	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C296	1-164-360-11	CERAMIC CHIP	0.1uF		16V	C348	1-135-145-11	TANTALUM CHIP	0.47uF	10%	35V
C297	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V	C349	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C298	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V	C350	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C299	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V	C351	1-135-145-11	TANTALUM CHIP	0.47uF	10%	35V
C300	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C352	1-135-338-11	TANTAL. CHIP	220uF	20%	4V
C301	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V	C353	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C302	1-164-360-11	CERAMIC CHIP	0.1uF		16V	C354	1-135-179-21	TANTAL. CHIP	2.2uF	20%	16V
C303	1-135-091-91	TANTAL. CHIP	1uF	20%	16V	C355	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C304	1-162-974-11	CERAMIC CHIP	0.01uF		50V	C356	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C305	1-162-974-11	CERAMIC CHIP	0.01uF		50V	C357	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C306	1-162-974-11	CERAMIC CHIP	0.01uF		50V	C358	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C307	1-164-346-11	CERAMIC CHIP	1uF		16V	C359	1-135-338-11	TANTAL. CHIP	220uF	20%	4V
C309	1-164-346-11	CERAMIC CHIP	1uF		16V	C360	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C310	1-164-360-11	CERAMIC CHIP	0.1uF		16V	C361	1-164-360-11	CERAMIC CHIP	0.1uF		16V

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
C362	1-135-259-11	TANTAL. CHIP 10uF 20%	6.3V	IC003	8-752-372-14	IC CXD1267AN	
C363	1-162-974-11	CERAMIC CHIP 0.01uF	50V	IC004	8-752-372-14	IC CXD1267AN	
C364	1-162-974-11	CERAMIC CHIP 0.01uF	50V	IC005	8-752-064-37	IC CXA1757R	
C365	1-135-259-11	TANTAL. CHIP 10uF 20%	6.3V	IC006	8-752-357-60	IC CXD1264R	
C366	1-162-927-11	CERAMIC CHIP 100PF 5%	50V	IC007	8-759-278-56	IC AK6440HF-E2	
C367	1-162-918-11	CERAMIC CHIP 18PF 5%	50V	IC008	8-752-377-29	IC CXD2417AR	
C368	1-162-925-11	CERAMIC CHIP 68PF 5%	50V	IC009	8-752-365-03	IC CXD2311R-T4	
C369	1-162-927-11	CERAMIC CHIP 100PF 5%	50V	IC010	8-752-365-03	IC CXD2311R-T4	
C370	1-162-918-11	CERAMIC CHIP 18PF 5%	50V	IC011	8-752-365-03	IC CXD2311R-T4	
C372	1-162-974-11	CERAMIC CHIP 0.01uF	50V	IC012	8-759-328-26	IC CXD2146R-T4	
C373	1-135-145-11	TANTALUM CHIP 0.47uF 10%	35V	IC013	8-752-375-84	IC CXD2145AR	
< CONNECTOR >				IC014	8-759-064-36	IC MB88346BPFV	
CN001	1-750-345-11	CONNECTOR, FFC/EPC (ZIF) 30P		IC015	8-759-064-36	IC MB88346BPFV	
CN002	1-770-543-21	CONNECTOR, FFC/FPC 40P		IC016	8-752-377-29	IC CXD2417AR	
* CN003	1-766-971-21	CONNECTOR, BOARD TO BOARD 42P		IC017	8-759-327-30	IC CXD2158R-T6	
* CN202	1-770-451-21	CONNECTOR, BOARD TO BOARD 70P		IC018	8-759-080-34	IC TA75W01FU	
CN290	1-766-660-21	CONNECTOR, FFC/FPC 24P		IC019	8-759-075-66	IC TA75S01F	
< TRIMMER >				IC201	8-759-278-57	IC AK6420HF-E2	
CT001	1-141-356-11	CAP, ADJ		IC202	8-759-328-16	IC CXD2181R-T6	
CT201	1-141-424-11	CAP, ADJ		IC203	8-759-328-13	IC CXD2182R	
CT202	1-141-423-61	CAP, ADJ		IC204	8-752-374-89	IC CXD2192Q	
< DIODE >				IC205	8-759-343-09	IC CXD2193AR-ER	
D001	8-719-046-90	DIODE MA2S111		IC207	8-759-198-63	IC S-81230SG-QB-T1	
D002	8-719-046-90	DIODE MA2S111		IC290	8-752-371-65	IC CXD2304R	
D003	8-719-046-90	DIODE MA2S111		IC291	8-759-082-60	IC TC7S66FU	
D004	8-719-046-90	DIODE MA2S111		IC292	8-752-053-21	IC CXA1211M	
D005	8-719-046-90	DIODE MA2S111		IC293	8-759-064-36	IC MB88346BPFV	
D006	8-719-046-90	DIODE MA2S111		IC294	8-752-056-59	IC CXA1592R	
D007	8-719-421-67	DIODE MA132WK		IC295	8-759-356-56	IC uPD6461GS-819-GLG-E2	
D008	8-719-421-67	DIODE MA132WK		IC296	8-759-079-53	IC TC74VHCT08FS(EL)	
D009	8-719-421-67	DIODE MA132WK		IC297	8-759-079-52	IC TC74VHC08FS(EL)	
D201	8-719-002-81	DIODE 1T363		IC298	8-759-186-26	IC TC74VHC02FS(EL)	
D202	8-719-041-39	DIODE KV1470		IC299	8-752-053-21	IC CXA1211M	
D297	8-719-046-90	DIODE MA2S111		IC300	8-752-009-51	IC CX20095A	
< FILTER >				IC301	8-752-072-86	IC CXA1822Q	
FL290	1-233-345-21	FILTER, LOW PASS (5.5MHz)		IC302	8-759-082-60	IC TC7S66FU	
FL291	1-233-345-21	FILTER, LOW PASS (5.5MHz)		< COIL >			
FL292	1-233-345-21	FILTER, LOW PASS (5.5MHz)		L001	1-414-392-21	INDUCTOR 1uH	
FL293	1-415-763-21	DELAY LINE, LC		L002	1-414-392-21	INDUCTOR 1uH	
FL294	1-415-763-21	DELAY LINE, LC		L003	1-414-398-11	INDUCTOR 10uH	
FL295	1-233-346-21	FILTER, BAND PASS (3.58MHz) (VX1000)		L004	1-414-392-21	INDUCTOR 1uH	
FL295	1-233-390-21	FILTER, BAND PASS (4.43MHz) (VX1000E)		L005	1-414-392-21	INDUCTOR 1uH	
< IC >				L006	1-414-398-11	INDUCTOR 10uH	
IC001	8-759-365-55	IC MC68HC11MA8FUL-SC424622FUL		L007	1-414-398-11	INDUCTOR 10uH	
IC002	8-752-372-14	IC CXD1267AN		L008	1-414-398-11	INDUCTOR 10uH	
				L009	1-414-398-11	INDUCTOR 10uH	
				L010	1-414-398-11	INDUCTOR 10uH	
				L011	1-414-398-11	INDUCTOR 10uH	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
L012	1-414-398-11	INDUCTOR 10uH		Q301	8-729-425-50	TRANSISTOR 2SB1462-Q	
L013	1-414-398-11	INDUCTOR 10uH		Q302	8-729-425-50	TRANSISTOR 2SB1462-Q	
L014	1-414-398-11	INDUCTOR 10uH		Q303	8-729-425-50	TRANSISTOR 2SB1462-Q	
L015	1-414-398-11	INDUCTOR 10uH		Q304	8-729-428-88	TRANSISTOR UN9113	
				Q305	8-729-429-18	TRANSISTOR UN9213	
L016	1-414-398-11	INDUCTOR 10uH		Q306	8-729-427-80	TRANSISTOR XP6401	
L017	1-414-398-11	INDUCTOR 10uH		Q307	8-729-106-60	TRANSISTOR 2SB1115A-YQ	
L018	1-414-392-21	INDUCTOR 1uH		Q308	8-729-425-64	TRANSISTOR 2SD2216-Q	
L019	1-414-392-21	INDUCTOR 1uH		Q309	8-729-425-50	TRANSISTOR 2SB1462-Q	
L021	1-414-398-11	INDUCTOR 10uH		Q310	8-729-425-50	TRANSISTOR 2SB1462-Q	
L201	1-414-398-11	INDUCTOR 10uH					
L202	1-414-398-11	INDUCTOR 10uH		Q311	8-729-425-50	TRANSISTOR 2SB1462-Q	
L203	1-414-398-11	INDUCTOR 10uH		Q312	8-729-425-64	TRANSISTOR 2SD2216-Q	
L205	1-411-275-21	COIL, VARIABLE		Q313	8-729-425-50	TRANSISTOR 2SB1462-Q	
L206	1-414-398-11	INDUCTOR 10uH					
						< RESISTOR >	
L207	1-414-392-21	INDUCTOR 1uH		R001	1-216-845-11	METAL CHIP 100K 5% 1/16W	
L208	1-414-392-21	INDUCTOR 1uH		R002	1-216-845-11	METAL CHIP 100K 5% 1/16W	
L209	1-414-392-21	INDUCTOR 1uH		R003	1-216-845-11	METAL CHIP 100K 5% 1/16W	
L210	1-414-392-21	INDUCTOR 1uH		R004	1-216-857-11	METAL CHIP 1M 5% 1/16W	
L211	1-414-392-21	INDUCTOR 1uH		R005	1-216-857-11	METAL CHIP 1M 5% 1/16W	
L212	1-414-392-21	INDUCTOR 1uH					
L213	1-414-392-21	INDUCTOR 1uH		R006	1-216-857-11	METAL CHIP 1M 5% 1/16W	
L290	1-414-398-11	INDUCTOR 10uH		R007	1-216-833-11	METAL CHIP 10K 5% 1/16W	
L291	1-414-398-11	INDUCTOR 10uH		R008	1-216-833-11	METAL CHIP 10K 5% 1/16W	
L292	1-414-398-11	INDUCTOR 10uH		R009	1-216-833-11	METAL CHIP 10K 5% 1/16W	
				R010	1-216-833-11	METAL CHIP 10K 5% 1/16W	
L293	1-414-398-11	INDUCTOR 10uH					
L294	1-414-398-11	INDUCTOR 10uH		R011	1-216-845-11	METAL CHIP 100K 5% 1/16W	
L295	1-414-398-11	INDUCTOR 10uH		R012	1-216-845-11	METAL CHIP 100K 5% 1/16W	
L297	1-414-398-11	INDUCTOR 10uH		R013	1-216-845-11	METAL CHIP 100K 5% 1/16W	
L298	1-414-398-11	INDUCTOR 10uH		R016	1-216-821-11	METAL CHIP 1K 5% 1/16W	
				R017	1-216-851-11	METAL CHIP 330K 5% 1/16W	
L299	1-414-398-11	INDUCTOR 10uH					
L300	1-412-063-21	INDUCTOR CHIP 68uH		R018	1-216-833-11	METAL CHIP 10K 5% 1/16W	
L301	1-414-392-21	INDUCTOR 1uH		R019	1-216-857-11	METAL CHIP 1M 5% 1/16W	
L302	1-414-398-11	INDUCTOR 10uH		R020	1-216-841-11	METAL CHIP 47K 5% 1/16W	
				R021	1-216-841-11	METAL CHIP 47K 5% 1/16W	
				R022	1-216-841-11	METAL CHIP 47K 5% 1/16W	
		< TRANSISTOR >					
Q001	8-729-427-70	TRANSISTOR XP4401		R023	1-216-845-11	METAL CHIP 100K 5% 1/16W	
Q002	8-729-427-70	TRANSISTOR XP4401		R024	1-218-847-11	METAL CHIP 1K 0.50% 1/16W	
Q003	8-729-427-70	TRANSISTOR XP4401		R025	1-218-876-11	METAL CHIP 16K 0.50% 1/16W	
Q011	8-729-429-18	TRANSISTOR UN9213		R026	1-218-871-11	METAL CHIP 10K 0.50% 1/16W	
Q290	8-729-106-60	TRANSISTOR 2SB1115A-YQ		R028	1-216-841-11	METAL CHIP 47K 5% 1/16W	
Q291	8-729-429-14	TRANSISTOR UN9211		R029	1-216-841-11	METAL CHIP 47K 5% 1/16W	
Q292	8-729-427-74	TRANSISTOR XP4601		R030	1-216-841-11	METAL CHIP 47K 5% 1/16W	
Q293	8-729-427-74	TRANSISTOR XP4601		R031	1-216-841-11	METAL CHIP 47K 5% 1/16W	
Q294	8-729-427-74	TRANSISTOR XP4601		R032	1-216-864-11	METAL CHIP 0 5% 1/16W	
Q295	8-729-427-74	TRANSISTOR XP4601		R037	1-216-805-11	METAL CHIP 47 5% 1/16W	
Q296	8-729-427-80	TRANSISTOR XP6401		R038	1-216-805-11	METAL CHIP 47 5% 1/16W	
Q297	8-729-425-50	TRANSISTOR 2SB1462-Q		R039	1-216-805-11	METAL CHIP 47 5% 1/16W	
Q298	8-729-425-64	TRANSISTOR 2SD2216-Q		R040	1-216-833-11	METAL CHIP 10K 5% 1/16W	
Q299	8-729-425-64	TRANSISTOR 2SD2216-Q		R041	1-216-807-11	METAL CHIP 68 5% 1/16W	
Q300	8-729-425-64	TRANSISTOR 2SD2216-Q		R042	1-216-807-11	METAL CHIP 68 5% 1/16W	

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R043	1-216-807-11	METAL CHIP	68	5%	1/16W	R290	1-216-841-11	METAL CHIP	47K	5%	1/16W
R047	1-218-877-11	METAL CHIP	18K	0.50%	1/16W	R291	1-216-821-11	METAL CHIP	1K	5%	1/16W
R049	1-216-864-11	METAL CHIP	0	5%	1/16W	R292	1-216-821-11	METAL CHIP	1K	5%	1/16W
R056	1-218-851-11	METAL CHIP	1.5K	0.50%	1/16W	R293	1-216-815-11	METAL CHIP	330	5%	1/16W
R058	1-218-889-11	METAL CHIP	56K	0.50%	1/16W	R294	1-216-815-11	METAL CHIP	330	5%	1/16W
R059	1-218-851-11	METAL CHIP	1.5K	0.50%	1/16W	R295	1-216-815-11	METAL CHIP	330	5%	1/16W
R060	1-218-889-11	METAL CHIP	56K	0.50%	1/16W	R296	1-216-821-11	METAL CHIP	1K	5%	1/16W
R062	1-218-851-11	METAL CHIP	1.5K	0.50%	1/16W	R297	1-216-821-11	METAL CHIP	1K	5%	1/16W
R063	1-218-889-11	METAL CHIP	56K	0.50%	1/16W	R298	1-216-833-11	METAL CHIP	10K	5%	1/16W
R065	1-216-864-11	METAL CHIP	0	5%	1/16W	R299	1-216-837-11	METAL CHIP	22K	5%	1/16W
R066	1-216-864-11	METAL CHIP	0	5%	1/16W	R300	1-216-837-11	METAL CHIP	22K	5%	1/16W
R068	1-216-864-11	METAL CHIP	0	5%	1/16W	R301	1-216-821-11	METAL CHIP	1K	5%	1/16W
R202	1-216-845-11	METAL CHIP	100K	5%	1/16W	R302	1-216-821-11	METAL CHIP	1K	5%	1/16W
R205	1-216-821-11	METAL CHIP	1K	5%	1/16W	R303	1-216-839-11	METAL CHIP	33K	5%	1/16W
R207	1-216-845-11	METAL CHIP	100K	5%	1/16W	R304	1-216-839-11	METAL CHIP	33K	5%	1/16W
R208	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	R305	1-216-821-11	METAL CHIP	1K	5%	1/16W
R209	1-216-849-11	METAL CHIP	220K	5%	1/16W	R306	1-216-821-11	METAL CHIP	1K	5%	1/16W
R212	1-216-833-11	METAL CHIP	10K	5%	1/16W	R308	1-216-853-11	METAL CHIP	470K	5%	1/16W
R214	1-216-833-11	METAL CHIP	10K	5%	1/16W	R309	1-216-833-11	METAL CHIP	10K	5%	1/16W
R215	1-216-833-11	METAL CHIP	10K	5%	1/16W	R310	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R216	1-216-864-11	METAL CHIP	0	5%	1/16W (VX1000E)	R311	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R217	1-216-864-11	METAL CHIP	0	5%	1/16W (VX1000)	R312	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R219	1-216-864-11	METAL CHIP	0	5%	1/16W	R314	1-216-814-11	METAL CHIP	270	5%	1/16W
R220	1-216-839-11	METAL CHIP	33K	5%	1/16W	R315	1-216-821-11	METAL CHIP	1K	5%	1/16W
R221	1-216-839-11	METAL CHIP	33K	5%	1/16W	R316	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R228	1-216-864-11	METAL CHIP	0	5%	1/16W	R317	1-216-864-11	METAL CHIP	0	5%	1/16W
R229	1-216-864-11	METAL CHIP	0	5%	1/16W (VX1000)	R318	1-216-815-11	METAL CHIP	330	5%	1/16W
R230	1-216-833-11	METAL CHIP	10K	5%	1/16W	R319	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R231	1-216-864-11	METAL CHIP	0	5%	1/16W (VX1000E)	R320	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R232	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	R321	1-216-821-11	METAL CHIP	1K	5%	1/16W
R233	1-216-864-11	METAL CHIP	0	5%	1/16W	R322	1-216-845-11	METAL CHIP	100K	5%	1/16W
R235	1-216-864-11	METAL CHIP	0	5%	1/16W	R323	1-216-821-11	METAL CHIP	1K	5%	1/16W
R236	1-216-833-11	METAL CHIP	10K	5%	1/16W	R324	1-216-821-11	METAL CHIP	1K	5%	1/16W
R239	1-216-833-11	METAL CHIP	10K	5%	1/16W	R325	1-216-845-11	METAL CHIP	100K	5%	1/16W
R240	1-216-864-11	METAL CHIP	0	5%	1/16W	R326	1-216-864-11	METAL CHIP	0	5%	1/16W
R241	1-216-839-11	METAL CHIP	33K	5%	1/16W	R328	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R242	1-216-864-11	METAL CHIP	0	5%	1/16W	R329	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R244	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	R330	1-216-833-11	METAL CHIP	10K	5%	1/16W
R245	1-216-833-11	METAL CHIP	10K	5%	1/16W	R332	1-216-833-11	METAL CHIP	10K	5%	1/16W
R251	1-216-864-11	METAL CHIP	0	5%	1/16W	R334	1-216-821-11	METAL CHIP	1K	5%	1/16W
R257	1-216-830-11	METAL CHIP	5.6K	5%	1/16W	R335	1-216-821-11	METAL CHIP	1K	5%	1/16W
R260	1-216-833-11	METAL CHIP	10K	5%	1/16W	R337	1-216-821-11	METAL CHIP	1K	5%	1/16W
R266	1-216-821-11	METAL CHIP	1K	5%	1/16W	R340	1-216-821-11	METAL CHIP	1K	5%	1/16W
R268	1-216-864-11	METAL CHIP	0	5%	1/16W	R341	1-216-821-11	METAL CHIP	1K	5%	1/16W
R272	1-216-839-11	METAL CHIP	33K	5%	1/16W	R342	1-216-833-11	METAL CHIP	10K	5%	1/16W
R278	1-216-864-11	METAL CHIP	0	5%	1/16W	R343	1-216-833-11	METAL CHIP	10K	5%	1/16W
R283	1-216-864-11	METAL CHIP	0	5%	1/16W	R344	1-216-833-11	METAL CHIP	10K	5%	1/16W
R284	1-216-864-11	METAL CHIP	0	5%	1/16W	R345	1-216-833-11	METAL CHIP	10K	5%	1/16W
R288	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	R346	1-216-833-11	METAL CHIP	10K	5%	1/16W
R289	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	R347	1-216-833-11	METAL CHIP	10K	5%	1/16W

Ref. No.	Part No.	Description	Remark
R348	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R349	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R350	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R351	1-216-864-11	METAL CHIP 0 5% 1/16W (VX1000)	
R352	1-216-864-11	METAL CHIP 0 5% 1/16W (VX1000E)	
R354	1-216-864-11	METAL CHIP 0 5% 1/16W	
R361	1-216-839-11	METAL CHIP 33K 5% 1/16W	
R362	1-216-864-11	METAL CHIP 0 5% 1/16W (VX1000E)	
R363	1-216-864-11	METAL CHIP 0 5% 1/16W (VX1000)	
R364	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R365	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R367	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R368	1-216-826-11	METAL CHIP 2.7K 5% 1/16W	
R369	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R372	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R373	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R374	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R375	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R376	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R377	1-216-807-11	METAL CHIP 68 5% 1/16W	
R378	1-216-815-11	METAL CHIP 330 5% 1/16W	
R379	1-216-853-11	METAL CHIP 470K 5% 1/16W	
R380	1-216-853-11	METAL CHIP 470K 5% 1/16W	
R381	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R382	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R383	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R384	1-216-807-11	METAL CHIP 68 5% 1/16W	
R385	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R386	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R387	1-216-807-11	METAL CHIP 68 5% 1/16W	
R388	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R389	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R390	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R391	1-216-791-11	METAL CHIP 3.3 5% 1/16W	
R392	1-216-822-11	METAL CHIP 1.2K 5% 1/16W	
R393	1-216-831-11	METAL CHIP 6.8K 5% 1/16W	
R394	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R395	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R396	1-216-864-11	METAL CHIP 0 5% 1/16W	
R397	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R398	1-216-864-11	METAL CHIP 0 5% 1/16W	
R399	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
< VIBRATOR >			
X001	1-760-657-21	VIBRATOR, CERAMIC (22MHz)	
X002	1-760-320-11	VIBRATOR, CRYSTAL (28.636MHz) (VX1000)	
X002	1-760-321-11	VIBRATOR, CRYSTAL (28.375Hz) (VX1000E)	
X201	1-579-738-21	VIBRATOR, CRYSTAL (14.318MHz) (VX1000)	
X201	1-579-780-21	VIBRATOR, CRYSTAL (14.1875MHz) (VX1000E)	

Ref. No.	Part No.	Description	Remark
*	A-7072-220-A	CC-92 BOARD, COMPLETE ***** (Ref. No. 8,000 Series)	
< CONNECTOR >			
CN100	1-766-634-21	CONNECTOR, FFC/FPC 23P	
CN101	1-573-372-21	CONNECTOR, BOARD TO BOARD 18P	
< DIODE >			
D100	8-719-420-14	DIODE MA8082-M	
D101	8-719-420-14	DIODE MA8082-M	
D102	8-719-420-14	DIODE MA8082-M	
D103	8-719-404-49	DIODE MA111	
D104	8-719-420-14	DIODE MA8082-M	
< RESISTOR >			
R100	1-216-832-11	METAL CHIP 8.2K 5% 1/16W	
R101	1-216-828-11	METAL CHIP 3.9K 5% 1/16W	
R102	1-216-826-11	METAL CHIP 2.7K 5% 1/16W	
R103	1-216-838-11	METAL CHIP 27K 5% 1/16W	
< SWITCH >			
S100	1-692-247-11	SWITCH, TACTIL (2 CLICK) (EDIT SEARCH -)	
S101	1-692-247-11	SWITCH, TACTIL (2 CLICK) (EDIT SEARCH +)	
S102	1-692-111-11	SWITCH, KEY BOARD (REC STANT/STOP)	
< CAPACITOR >			
C201	1-104-852-11	TANTAL. CHIP 22uF 20% 10V	
C202	1-104-852-11	TANTAL. CHIP 22uF 20% 10V	
C203	1-104-852-11	TANTAL. CHIP 22uF 20% 10V	
C204	1-104-912-11	TANTAL. CHIP 3.3uF 20% 16V	
C206	1-104-912-11	TANTAL. CHIP 3.3uF 20% 16V	
C208	1-104-912-11	TANTAL. CHIP 3.3uF 20% 16V	
C210	1-162-974-11	CERAMIC CHIP 0.01uF 50V	
C211	1-162-974-11	CERAMIC CHIP 0.01uF 50V	
C212	1-162-974-11	CERAMIC CHIP 0.01uF 50V	
C213	1-104-908-11	TANTAL. CHIP 47uF 20% 4V	
C214	1-104-848-11	TANTAL. CHIP 100uF 20% 4V	
C215	1-104-848-11	TANTAL. CHIP 100uF 20% 4V	
C216	1-162-974-11	CERAMIC CHIP 0.01uF 50V	
C217	1-104-917-11	TANTAL. CHIP 15uF 20% 20V	
C218	1-162-974-11	CERAMIC CHIP 0.01uF 50V	
C219	1-104-917-11	TANTAL. CHIP 15uF 20% 20V	
C220	1-162-974-11	CERAMIC CHIP 0.01uF 50V	
C221	1-104-917-11	TANTAL. CHIP 15uF 20% 20V	
C222	1-104-908-11	TANTAL. CHIP 47uF 20% 4V	

Ref.No.	Part No.	Description	Remark
< CONNECTOR >			
* CN201	1-764-396-21	CONNECTOR, BOARD TO BOARD 42P	
< COIL >			
L201	1-412-032-11	INDUCTOR CHIP 100uH	
L202	1-412-032-11	INDUCTOR CHIP 100uH	
L203	1-412-032-11	INDUCTOR CHIP 100uH	
< TRANSISTOR >			
Q201	8-729-232-86	TRANSISTOR 2SK1875	
Q202	8-729-232-86	TRANSISTOR 2SK1875	
Q203	8-729-232-86	TRANSISTOR 2SK1875	
< RESISTOR >			
R201	1-216-840-11	METAL CHIP 39K 5% 1/16W	
R202	1-216-840-11	METAL CHIP 39K 5% 1/16W	
R203	1-216-840-11	METAL CHIP 39K 5% 1/16W	
R204	1-216-820-11	METAL CHIP 820 5% 1/16W	
R205	1-216-820-11	METAL CHIP 820 5% 1/16W	
R206	1-216-820-11	METAL CHIP 820 5% 1/16W	
R207	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R208	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R209	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R210	1-216-828-11	METAL CHIP 3.9K 5% 1/16W	
R211	1-216-809-11	METAL CHIP 100 5% 1/16W	
R212	1-216-828-11	METAL CHIP 3.9K 5% 1/16W	
R213	1-216-809-11	METAL CHIP 100 5% 1/16W	
R214	1-216-828-11	METAL CHIP 3.9K 5% 1/16W	
R215	1-216-809-11	METAL CHIP 100 5% 1/16W	

* A-7072-226-A	CN-90	BOARD, COMPLETE	

(Ref.No. 9,000 Series)			
< CONNECTOR >			
CN981	1-766-652-11	CONNECTOR, FFC/FPC 16P	
* CN982	1-573-356-11	CONNECTOR, FFC/FPC 16P	

* A-7066-434-A	DD-75	BOARD, COMPLETE (VX1000)	

* A-7066-612-A	DD-75P	BOARD, COMPLETE (VX1000E)	

(Ref.No. 9,000 Series)			
1-656-386-11			
FP-199 FLEXIBLE BOARD			

Ref.No.	Part No.	Description	Remark
< CAPACITOR >			
C001	1-165-178-11	CERAMIC CHIP 6.8uF	16V
C002	1-104-851-11	TANTAL. CHIP 10uF	20% 10V
C003	1-104-851-11	TANTAL. CHIP 10uF	20% 10V
C004	1-165-178-11	CERAMIC CHIP 6.8uF	16V
C005	1-104-914-11	TANTAL. CHIP 22uF	20% 16V
C006	1-104-914-11	TANTAL. CHIP 22uF	20% 16V
C007	1-104-914-11	TANTAL. CHIP 22uF	20% 16V
C008	1-104-914-11	TANTAL. CHIP 22uF	20% 16V
C009	1-104-823-11	TANTAL. CHIP 47uF	20% 16V
C010	1-104-914-11	TANTAL. CHIP 22uF	20% 16V
C011	1-165-178-11	CERAMIC CHIP 6.8uF	16V
C012	1-104-851-11	TANTAL. CHIP 10uF	20% 10V
C013	1-104-851-11	TANTAL. CHIP 10uF	20% 10V
C014	1-104-851-11	TANTAL. CHIP 10uF	20% 10V
C015	1-162-915-11	CERAMIC CHIP 10PF	0.5PF 50V
C016	1-164-315-11	CERAMIC CHIP 470PF	5% 50V
C017	1-164-315-11	CERAMIC CHIP 470PF	5% 50V
C018	1-162-919-11	CERAMIC CHIP 22PF	5% 50V
C019	1-165-178-11	CERAMIC CHIP 6.8uF	16V
C020	1-164-315-11	CERAMIC CHIP 470PF	5% 50V
C021	1-164-315-11	CERAMIC CHIP 470PF	5% 50V
C022	1-165-178-11	CERAMIC CHIP 6.8uF	16V
C023	1-162-915-11	CERAMIC CHIP 10PF	0.5PF 50V
C024	1-162-915-11	CERAMIC CHIP 10PF	0.5PF 50V
C025	1-164-315-11	CERAMIC CHIP 470PF	5% 50V
C026	1-164-315-11	CERAMIC CHIP 470PF	5% 50V
C027	1-162-915-11	CERAMIC CHIP 10PF	0.5PF 50V
C028	1-162-915-11	CERAMIC CHIP 10PF	0.5PF 50V
C029	1-165-178-11	CERAMIC CHIP 6.8uF	16V
C030	1-104-851-11	TANTAL. CHIP 10uF	20% 10V
C031	1-104-851-11	TANTAL. CHIP 10uF	20% 10V
C032	1-104-851-11	TANTAL. CHIP 10uF	20% 10V
C033	1-104-851-11	TANTAL. CHIP 10uF	20% 10V
C034	1-162-969-11	CERAMIC CHIP 0.0068uF	10% 25V
C035	1-162-969-11	CERAMIC CHIP 0.0068uF	10% 25V
C036	1-164-363-11	CERAMIC CHIP 560PF	5% 50V
C037	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C038	1-104-915-11	TANTAL. CHIP 2.2uF	20% 20V
C039	1-164-821-11	CERAMIC CHIP 3.3uF	10% 16V
C040	1-164-821-11	CERAMIC CHIP 3.3uF	10% 16V
C041	1-104-915-11	TANTAL. CHIP 2.2uF	20% 20V
C042	1-164-363-11	CERAMIC CHIP 560PF	5% 50V
C043	1-162-967-11	CERAMIC CHIP 0.0033uF	10% 50V
C044	1-165-176-11	CERAMIC CHIP 0.047uF	10% 16V
C045	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C046	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C047	1-165-128-11	CERAMIC CHIP 0.22uF	16V
C048	1-165-178-11	CERAMIC CHIP 6.8uF	16V
C049	1-162-969-11	CERAMIC CHIP 0.0068uF	10% 25V

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C050	1-164-816-11	CERAMIC CHIP	220PF 2% 50V	C100	1-104-914-11	TANTAL. CHIP	22uF 20% 16V
C051	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C101	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C052	1-164-156-11	CERAMIC CHIP	0.1uF 25V	C102	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C053	1-165-178-11	CERAMIC CHIP	6.8uF 16V	C103	1-164-346-11	CERAMIC CHIP	1uF 16V
C054	1-104-851-11	TANTAL. CHIP	10uF 20% 10V	C201	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C055	1-104-851-11	TANTAL. CHIP	10uF 20% 10V	< CONNECTOR >			
C056	1-104-851-11	TANTAL. CHIP	10uF 20% 10V	CN001	1-770-542-21	CONNECTOR, FFC/FPC 40P	
C057	1-165-178-11	CERAMIC CHIP	6.8uF 16V	CN002	1-770-542-21	CONNECTOR, FFC/FPC 40P	
C058	1-104-851-11	TANTAL. CHIP	10uF 20% 10V	* CN003	1-770-452-21	CONNECTOR, BOARD TO BOARD 30P	
C059	1-104-851-11	TANTAL. CHIP	10uF 20% 10V	CN200	1-770-585-11	PIN, CONNECTOR (PC BOARD) 3P	
C060	1-165-178-11	CERAMIC CHIP	6.8uF 16V	* CN201	1-580-756-21	PIN, CONNECTOR 7P	
C061	1-162-915-11	CERAMIC CHIP	10PF 0.5PF 50V	< DIODE >			
C062	1-164-315-11	CERAMIC CHIP	470PF 5% 50V	D001	8-719-404-49	DIODE	MA111
C063	1-164-315-11	CERAMIC CHIP	470PF 5% 50V	D002	8-719-989-33	DIODE	FC806
C064	1-162-919-11	CERAMIC CHIP	22PF 5% 50V	D003	8-719-938-75	DIODE	SB05-05CP
C065	1-165-178-11	CERAMIC CHIP	6.8uF 16V	D202	8-719-046-90	DIODE	MA2S111
C066	1-104-851-11	TANTAL. CHIP	10uF 20% 10V	D203	8-719-046-90	DIODE	MA2S111
C067	1-104-851-11	TANTAL. CHIP	10uF 20% 10V	D204	8-719-046-90	DIODE	MA2S111
C068	1-164-315-11	CERAMIC CHIP	470PF 5% 50V	D205	8-719-050-39	DIODE	RD2.7UM-B
C069	1-164-315-11	CERAMIC CHIP	470PF 5% 50V	D206	8-719-046-90	DIODE	MA2S111
C070	1-162-915-11	CERAMIC CHIP	10PF 0.5PF 50V	D207	8-719-421-27	DIODE	MA728
C071	1-162-915-11	CERAMIC CHIP	10PF 0.5PF 50V	D208	8-719-421-27	DIODE	MA728
C072	1-164-315-11	CERAMIC CHIP	470PF 5% 50V	< FUSE >			
C073	1-164-315-11	CERAMIC CHIP	470PF 5% 50V	△F001	1-533-604-21	FUSE (1.4A 125V) (VX1000)	
C074	1-162-915-11	CERAMIC CHIP	10PF 0.5PF 50V	△F002	1-533-604-21	FUSE (1.4A 125V) (VX1000)	
C075	1-164-315-11	CERAMIC CHIP	470PF 5% 50V	△F003	1-533-604-21	FUSE (1.4A 125V) (VX1000)	
C076	1-162-915-11	CERAMIC CHIP	10PF 0.5PF 50V	△F004	1-533-604-21	FUSE (1.4A 125V) (VX1000)	
C077	1-104-851-11	TANTAL. CHIP	10uF 20% 10V	△F005	1-533-604-21	FUSE (1.4A 125V) (VX1000)	
C078	1-104-851-11	TANTAL. CHIP	10uF 20% 10V	△F006	1-533-604-21	FUSE (1.4A 125V) (VX1000)	
C079	1-165-178-11	CERAMIC CHIP	6.8uF 16V	< IC >			
C080	1-162-969-11	CERAMIC CHIP	0.0068uF 10% 25V	IC001	8-759-328-27	IC	SN104230PM
C081	1-165-178-11	CERAMIC CHIP	6.8uF 16V	IC002	8-759-328-27	IC	SN104230PM
C082	1-164-227-11	CERAMIC CHIP	0.022uF 10% 25V	IC200	8-759-998-92	IC	LM393D
C083	1-162-967-11	CERAMIC CHIP	0.0033uF 10% 50V	< COIL >			
C084	1-104-851-11	TANTAL. CHIP	10uF 20% 10V	L001	1-414-396-21	INDUCTOR	4.7uH
C085	1-165-178-11	CERAMIC CHIP	6.8uF 16V	L002	1-414-396-21	INDUCTOR	4.7uH
C086	1-164-227-11	CERAMIC CHIP	0.022uF 10% 25V	L003	1-406-824-11	COIL, CHOKE	22uH
C087	1-162-967-11	CERAMIC CHIP	0.0033uF 10% 50V	L004	1-406-823-11	COIL, CHOKE	10uH
C088	1-165-176-11	CERAMIC CHIP	0.047uF 10% 16V	L005	1-414-396-21	INDUCTOR	4.7uH
C089	1-164-821-11	CERAMIC CHIP	3.3uF 10% 16V	L006	1-406-824-11	COIL, CHOKE	22uH
C090	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	L007	1-414-396-21	INDUCTOR	4.7uH
C091	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	L008	1-414-396-21	INDUCTOR	4.7uH
C092	1-165-128-11	CERAMIC CHIP	0.22uF 16V	L009	1-406-825-11	COIL, CHOKE	33uH
C093	1-162-969-11	CERAMIC CHIP	0.0068uF 10% 25V	L010	1-406-823-11	COIL, CHOKE	10uH
C094	1-104-851-11	TANTAL. CHIP	10uF 20% 10V	L011	1-414-396-21	INDUCTOR	4.7uH
C095	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V				
C096	1-165-178-11	CERAMIC CHIP	6.8uF 16V				
C097	1-164-156-11	CERAMIC CHIP	0.1uF 25V				
C098	1-165-178-11	CERAMIC CHIP	6.8uF 16V				
C099	1-104-851-11	TANTAL. CHIP	10uF 20% 10V				

The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description
L012	1-414-396-21	INDUCTOR 4.7uH
L013	1-414-396-21	INDUCTOR 4.7uH
L014	1-406-824-11	COIL, CHOKE 22uH
L015	1-414-396-21	INDUCTOR 4.7uH
L016	1-414-406-11	INDUCTOR 220uH
L017	1-406-823-11	COIL, CHOKE 10uH
L018	1-414-406-11	INDUCTOR 220uH
L019	1-414-396-21	INDUCTOR 4.7uH
L020	1-414-396-21	INDUCTOR 4.7uH
L021	1-406-824-11	COIL, CHOKE 22uH
L022	1-414-396-21	INDUCTOR 4.7uH
L023	1-414-396-21	INDUCTOR 4.7uH
L024	1-414-396-21	INDUCTOR 4.7uH
L025	1-406-824-11	COIL, CHOKE 22uH
L026	1-406-823-11	COIL, CHOKE 10uH
L027	1-414-396-21	INDUCTOR 4.7uH
L028	1-414-396-21	INDUCTOR 4.7uH
L029	1-406-824-11	COIL, CHOKE 22uH
L030	1-414-396-21	INDUCTOR 4.7uH
L031	1-414-396-21	INDUCTOR 4.7uH
L032	1-406-825-11	COIL, CHOKE 33uH
L033	1-406-823-11	COIL, CHOKE 10uH
L034	1-406-825-11	COIL, CHOKE 33uH
L035	1-406-823-11	COIL, CHOKE 10uH
L036	1-414-402-11	INDUCTOR 47uH
L037	1-406-825-11	COIL, CHOKE 33uH

< IC LINK >

△PS001	1-576-122-21	LINK, IC (CCP2E10 0.4A)
△PS002	1-576-122-21	LINK, IC (CCP2E10 0.4A)
△PS011	1-533-640-21	LINK, IC (1.4A 60A) (VX1000E)
△PS012	1-533-640-21	LINK, IC (1.4A 60A) (VX1000E)
△PS013	1-533-640-21	LINK, IC (1.4A 60A) (VX1000E)
△PS014	1-533-640-21	LINK, IC (1.4A 60A) (VX1000E)
△PS015	1-533-640-21	LINK, IC (1.4A 60A) (VX1000E)
△PS016	1-533-640-21	LINK, IC (1.4A 60A) (VX1000E)

< TRANSISTOR >

Q001	8-729-030-78	TRANSISTOR	FP102T-TL
Q002	8-729-030-75	TRANSISTOR	2SK2316-TD
Q003	8-729-030-78	TRANSISTOR	FP102T-TL
Q004	8-729-030-75	TRANSISTOR	2SK2316-TD
Q005	8-729-032-00	TRANSISTOR	2SJ381-TD
Q006	8-729-030-78	TRANSISTOR	FP102T-TL
Q007	8-729-429-18	TRANSISTOR	UN9213
Q008	8-729-030-78	TRANSISTOR	FP102T-TL
Q009	8-729-428-88	TRANSISTOR	UN9113
Q010	8-729-428-88	TRANSISTOR	UN9113
Q011	8-729-023-85	TRANSISTOR	2SJ168
Q012	8-729-015-47	TRANSISTOR	2SK1062

Ref. No.	Part No.	Description	Remark
Q013	8-729-429-18	TRANSISTOR	UN9213
Q014	8-729-025-81	TRANSISTOR	2SA1729-RS
Q015	8-729-030-78	TRANSISTOR	FP102T-TL
Q016	8-729-030-78	TRANSISTOR	FP102T-TL
Q017	8-729-030-75	TRANSISTOR	2SK2316-TD
Q018	8-729-030-78	TRANSISTOR	FP102T-TL
Q019	8-729-030-75	TRANSISTOR	2SK2316-TD
Q020	8-729-030-78	TRANSISTOR	FP102T-TL
Q021	8-729-030-78	TRANSISTOR	FP102T-TL
Q022	8-729-025-81	TRANSISTOR	2SA1729-RS
Q023	8-729-030-78	TRANSISTOR	FP102T-TL
Q024	8-729-427-23	TRANSISTOR	XP4116
Q025	8-729-427-23	TRANSISTOR	XP4116
Q026	8-729-427-45	TRANSISTOR	XP4212
Q027	8-729-023-32	TRANSISTOR	2SK2037
Q028	8-729-023-32	TRANSISTOR	2SK2037
Q029	8-729-427-70	TRANSISTOR	XP4401
Q200	8-729-024-24	TRANSISTOR	2SK2154-TL
Q201	8-729-024-24	TRANSISTOR	2SK2154-TL
Q203	8-729-429-18	TRANSISTOR	UN9213
Q204	8-729-425-50	TRANSISTOR	2SB1462-Q
Q205	8-729-425-50	TRANSISTOR	2SB1462-Q
Q206	8-729-428-88	TRANSISTOR	UN9113
Q207	8-729-429-06	TRANSISTOR	UN911E
Q208	8-729-428-88	TRANSISTOR	UN9113
Q209	8-729-822-05	TRANSISTOR	2SD1622-ST
Q210	8-729-425-50	TRANSISTOR	2SB1462-Q
Q211	8-729-425-50	TRANSISTOR	2SB1462-Q
Q213	8-729-427-46	TRANSISTOR	XP4213
Q214	8-729-425-64	TRANSISTOR	2SD2216-Q
Q215	8-729-427-46	TRANSISTOR	XP4213
Q216	8-729-427-46	TRANSISTOR	XP4213
Q217	8-729-427-46	TRANSISTOR	XP4213
< RESISTOR >			
R001	1-216-845-11	METAL CHIP	100K 5% 1/16W
R002	1-216-837-11	METAL CHIP	22K 5% 1/16W
R003	1-216-837-11	METAL CHIP	22K 5% 1/16W
R004	1-216-837-11	METAL CHIP	22K 5% 1/16W
R005	1-216-830-11	METAL CHIP	5.6K 5% 1/16W
R006	1-216-833-11	METAL CHIP	10K 5% 1/16W
R007	1-216-832-11	METAL CHIP	8.2K 5% 1/16W
R008	1-218-859-11	METAL CHIP	3.3K 0.50% 1/16W
R009	1-211-969-11	METAL CHIP	10 0.50% 1/16W
R010	1-216-845-11	METAL CHIP	100K 5% 1/16W
R011	1-216-837-11	METAL CHIP	22K 5% 1/16W
R012	1-218-875-11	METAL CHIP	15K 0.50% 1/16W
R013	1-216-837-11	METAL CHIP	22K 5% 1/16W
R014	1-218-855-11	METAL CHIP	2.2K 0.50% 1/16W
R015	1-218-875-11	METAL CHIP	15K 0.50% 1/16W

The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R016	1-218-855-11	METAL CHIP	2.2K	0.50%	1/16W	R066	1-218-871-11	METAL CHIP	10K	0.50%	1/16W
R017	1-218-877-11	METAL CHIP	18K	0.50%	1/16W	R067	1-216-837-11	METAL CHIP	22K	5%	1/16W
R018	1-218-877-11	METAL CHIP	18K	0.50%	1/16W	R068	1-218-855-11	METAL CHIP	2.2K	0.50%	1/16W
R019	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	R069	1-218-875-11	METAL CHIP	15K	0.50%	1/16W
R020	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	R070	1-216-864-11	METAL CHIP	0	5%	1/16W
R021	1-218-883-11	METAL CHIP	33K	0.50%	1/16W	R071	1-218-873-11	METAL CHIP	12K	0.50%	1/16W
R022	1-216-864-11	METAL CHIP	0	5%	1/16W	R072	1-218-877-11	METAL CHIP	18K	0.50%	1/16W
R023	1-218-869-11	METAL CHIP	8.2K	0.50%	1/16W	R073	1-218-879-11	METAL CHIP	22K	0.50%	1/16W
R024	1-218-863-11	METAL CHIP	4.7K	0.50%	1/16W	R074	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R025	1-218-877-11	METAL CHIP	18K	0.50%	1/16W	R075	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R026	1-218-873-11	METAL CHIP	12K	0.50%	1/16W	R076	1-218-859-11	METAL CHIP	3.3K	0.50%	1/16W
R027	1-216-833-11	METAL CHIP	10K	5%	1/16W	R077	1-218-883-11	METAL CHIP	33K	0.50%	1/16W
R028	1-216-837-11	METAL CHIP	22K	5%	1/16W	R078	1-216-864-11	METAL CHIP	0	5%	1/16W
R029	1-218-879-11	METAL CHIP	22K	0.50%	1/16W	R079	1-218-871-11	METAL CHIP	10K	0.50%	1/16W
R030	1-216-842-11	METAL CHIP	56K	5%	1/16W	R080	1-218-883-11	METAL CHIP	33K	0.50%	1/16W
R031	1-216-841-11	METAL CHIP	47K	5%	1/16W	R081	1-218-877-11	METAL CHIP	18K	0.50%	1/16W
R032	1-216-837-11	METAL CHIP	22K	5%	1/16W	R082	1-218-881-11	METAL CHIP	27K	0.50%	1/16W
R033	1-216-864-11	METAL CHIP	0	5%	1/16W	R083	1-216-833-11	METAL CHIP	10K	5%	1/16W
R034	1-218-885-11	METAL CHIP	39K	0.50%	1/16W	R084	1-216-833-11	METAL CHIP	10K	5%	1/16W
R035	1-218-897-11	METAL CHIP	120K	0.50%	1/16W	R085	1-218-883-11	METAL CHIP	33K	0.50%	1/16W
R036	1-218-867-11	METAL CHIP	6.8K	0.50%	1/16W	R086	1-218-885-11	METAL CHIP	39K	0.50%	1/16W
R037	1-218-861-11	METAL CHIP	3.9K	0.50%	1/16W	R087	1-216-864-11	METAL CHIP	0	5%	1/16W
R038	1-216-845-11	METAL CHIP	100K	5%	1/16W	R088	1-218-879-11	METAL CHIP	22K	0.50%	1/16W
R039	1-216-845-11	METAL CHIP	100K	5%	1/16W	R089	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R040	1-218-877-11	METAL CHIP	18K	0.50%	1/16W	R090	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R041	1-218-879-11	METAL CHIP	22K	0.50%	1/16W	R091	1-218-879-11	METAL CHIP	22K	0.50%	1/16W
R042	1-216-830-11	METAL CHIP	5.6K	5%	1/16W	R092	1-216-841-11	METAL CHIP	47K	5%	1/16W
R043	1-216-830-11	METAL CHIP	5.6K	5%	1/16W	R093	1-218-865-11	METAL CHIP	5.6K	0.50%	1/16W
R044	1-216-837-11	METAL CHIP	22K	5%	1/16W	R094	1-218-887-11	METAL CHIP	47K	0.50%	1/16W
R045	1-211-960-11	METAL GLAZE	22	0.50%	1/10W	R095	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R046	1-218-887-11	METAL CHIP	47K	0.50%	1/16W	R096	1-218-877-11	METAL CHIP	18K	0.50%	1/16W
R047	1-218-865-11	METAL CHIP	5.6K	0.50%	1/16W	R097	1-218-887-11	METAL CHIP	47K	0.50%	1/16W
R048	1-218-887-11	METAL CHIP	47K	0.50%	1/16W	R098	1-218-875-11	METAL CHIP	15K	0.50%	1/16W
R049	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	R099	1-218-855-11	METAL CHIP	2.2K	0.50%	1/16W
R050	1-218-879-11	METAL CHIP	22K	0.50%	1/16W	R100	1-218-857-11	METAL CHIP	2.7K	0.50%	1/16W
R051	1-218-875-11	METAL CHIP	15K	0.50%	1/16W	R101	1-218-877-11	METAL CHIP	18K	0.50%	1/16W
R052	1-218-887-11	METAL CHIP	47K	0.50%	1/16W	R102	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R053	1-216-833-11	METAL CHIP	10K	5%	1/16W	R103	1-216-864-11	METAL CHIP	0	5%	1/16W
R054	1-218-875-11	METAL CHIP	15K	0.50%	1/16W	R105	1-216-841-11	METAL CHIP	47K	5%	1/16W
R055	1-218-855-11	METAL CHIP	2.2K	0.50%	1/16W	R106	1-216-840-11	METAL CHIP	39K	5%	1/16W
R056	1-218-831-11	METAL GLAZE	220	0.50%	1/16W	R200	1-216-845-11	METAL CHIP	100K	5%	1/16W
R057	1-218-877-11	METAL CHIP	18K	0.50%	1/16W	R201	1-216-845-11	METAL CHIP	100K	5%	1/16W
R058	1-216-845-11	METAL CHIP	100K	5%	1/16W	R202	1-216-821-11	METAL CHIP	1K	5%	1/16W
R059	1-216-837-11	METAL CHIP	22K	5%	1/16W	R204	1-216-841-11	METAL CHIP	47K	5%	1/16W
R060	1-216-837-11	METAL CHIP	22K	5%	1/16W	R205	1-216-833-11	METAL CHIP	10K	5%	1/16W
R061	1-216-832-11	METAL CHIP	8.2K	5%	1/16W	R206	1-216-842-11	METAL CHIP	56K	5%	1/16W
R062	1-218-881-11	METAL CHIP	27K	0.50%	1/16W	R207	1-216-848-11	METAL CHIP	180K	5%	1/16W
R063	1-216-837-11	METAL CHIP	22K	5%	1/16W	R208	1-216-841-11	METAL CHIP	47K	5%	1/16W
R064	1-216-837-11	METAL CHIP	22K	5%	1/16W	R209	1-216-841-11	METAL CHIP	47K	5%	1/16W
R065	1-218-879-11	METAL CHIP	22K	0.50%	1/16W	R210	1-216-845-11	METAL CHIP	100K	5%	1/16W

DD-75**DI-62****FP-213****FP-215****FP-242**

Ref.No.	Part No.	Description	Remark
R211	1-216-853-11	METAL CHIP 470K 5% 1/16W	
R212	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R213	1-216-857-11	METAL CHIP 1M 5% 1/16W	
R214	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R215	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R216	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R217	1-218-863-11	METAL CHIP 4.7K 0.50% 1/16W	
R218	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R219	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R220	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R221	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R222	1-218-889-11	METAL CHIP 56K 0.50% 1/16W	
R223	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R224	1-218-863-11	METAL CHIP 4.7K 0.50% 1/16W	
R225	1-216-864-11	METAL CHIP 0 5% 1/16W	
R226	1-218-891-11	METAL CHIP 68K 0.50% 1/16W	
R227	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R228	1-216-799-11	METAL CHIP 15 5% 1/16W	
R230	1-216-839-11	METAL CHIP 33K 5% 1/16W	
R231	1-211-987-11	METAL GLAZE 56 0.50% 1/16W	
R232	1-218-879-11	METAL CHIP 22K 0.50% 1/16W	
R233	1-218-831-11	METAL GLAZE 220 0.50% 1/16W	
R236	1-216-809-11	METAL CHIP 100 5% 1/16W	
< TRANSFORMER >			
T001	1-427-916-21	TRANSFORMER, CONVERTER	
T002	1-427-917-21	TRANSFORMER, CONVERTER	
* A-7072-223-A DI-62 BOARD, COMPLETE ***** (Ref.No. 9,000 Series)			
< CAPACITOR >			
C390	1-164-346-11	CERAMIC CHIP 1uF 16V	
C391	1-162-966-11	CERAMIC CHIP 0.0022uF 10% 50V	
C392	1-162-966-11	CERAMIC CHIP 0.0022uF 10% 50V	
< CONNECTOR >			
* CN390	1-580-756-21	PIN, CONNECTOR 7P	
< DIODE >			
D390	8-719-420-14	DIODE MA8082-M	
D391	8-719-422-97	DIODE MA8091-M	
D392	8-719-423-32	DIODE MA8120-M	
< JACK >			
J390	1-770-497-11	CONNECTOR, DC-IN (DC IN)	

Ref.No.	Part No.	Description	Remark
< RESISTOR >			
R370	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R371	1-216-821-11	METAL CHIP 1K 5% 1/16W	
* A-7072-311-A FP-213 BOARD, COMPLETE ***** (Ref.No. 6,000 Series)			
< JACK >			
J002	1-569-810-21	JACK (SMALL TYPE) (MIC (PLUG IN POWER))	
* A-7072-312-A FP-215 BOARD, COMPLETE ***** (Ref.No. 6,000 Series)			
< CAPACITOR >			
C400	1-104-752-11	TANTAL. CHIP 33uF 20% 6.3V	
< CONNECTOR >			
CN400	1-691-524-11	CONNECTOR, BOARD TO BOARD 20P	
< DIODE >			
D400	8-719-951-20	LED BR1102W	
< IC >			
IC400	8-749-923-29	IC RS-20E-T	
< RESISTOR >			
R400	1-216-805-11	METAL CHIP 47 5% 1/16W	
R401	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R402	1-216-817-11	METAL CHIP 470 5% 1/16W	
< SWITCH >			
S400	1-572-473-11	SWITCH, TACTIL (CP CHECK)	
FP-242 BOARD (Ref.No. 5,000 Series) ***** 3-748-761-01 HOLDER (S), SENSOR 3-748-762-01 HOLDER (T), SENSOR 3-748-763-01 HOLDER, FPC			
< DIODE >			
D901	8-719-050-98	DIODE LN57.S0	

FP-242

FP-243

FT-84

HL-5

JC-12

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		< HALL ELEMENT >					
H901	8-719-033-37	ELEMENT, HALL HW-105C		*	A-7072-222-A	HL-5 BOARD, COMPLETE	
H902	8-719-033-37	ELEMENT, HALL HW-105C				*****	(Ref. No. 5,000 Series)
		< RESISTOR >				< CONNECTOR >	
R901	1-216-807-11	METAL CHIP 68 5% 1/16W		CN300	1-766-643-21	CONNECTOR, FFC/FPC 7P	
R902	1-216-807-11	METAL CHIP 68 5% 1/16W				< DIODE >	
R903	1-216-807-11	METAL CHIP 68 5% 1/16W		D300	8-719-404-49	DIODE MA111	
R904	1-216-807-11	METAL CHIP 68 5% 1/16W		D301	8-719-420-14	DIODE MA8082-M	
		FP-243 BOARD (Ref. No. 5,000 Series)				< FERRITE BEAD >	
		*****		FB301	1-543-956-21	BEAD, FERRITE (CHIP)	
		< CONNECTOR >		FB302	1-543-956-21	BEAD, FERRITE (CHIP)	
CN901	1-770-312-11	CONNECTOR 4P		FB303	1-543-956-21	BEAD, FERRITE (CHIP)	
		< TRANSISTOR >		FB304	1-543-956-21	BEAD, FERRITE (CHIP)	
Q901	8-729-028-71	TRANSISTOR PN166.S0				< JACK >	
Q902	8-729-028-71	TRANSISTOR PN166.S0		J300	1-565-276-21	JACK, ULTRA SMALL 1P (LANC)	
		< SWITCH >		J301	1-563-282-21	JACK, SMALL TYPE (C)	
S901	1-762-351-11	SWITCH, PUSH (1 KEY)(REC PROOF)				< COIL >	
		A-7072-231-A FT-84 BOARD, COMPLETE		L300	1-543-963-21	BEAD, FERRITE (CHIP)	
*		*****				< RESISTOR >	
		(Ref. No. 6,000 Series)		R300	1-162-965-11	CERAMIC CHIP 0.0015uF 10% 50V	
		< CAPACITOR >					
C201	1-164-360-11	CERAMIC CHIP 0.1uF 16V		*	A-7066-611-A	JC-12P BOARD, COMPLETE (VX1000E)	
		< CONNECTOR >				*****	
* CN201	1-573-984-11	CONNECTOR, BOARD TO BOARD 10P		*	A-7066-693-A	JC-12 BOARD, COMPLETE (VX1000)	
		< DIODE >				*****	(Ref. No. 3,000 Series)
D201	8-719-951-20	LED BR1102W				< CAPACITOR >	
		< IC >		C400	1-104-908-11	TANTAL. CHIP 47uF 20% 4V	
IC201	8-749-923-29	IC RS-20E-T		C401	1-104-908-11	TANTAL. CHIP 47uF 20% 4V	
		< RESISTOR >		C402	1-164-360-11	CERAMIC CHIP 0.1uF 16V	
R202	1-216-817-11	METAL CHIP 470 5% 1/16W		C403	1-104-908-11	TANTAL. CHIP 47uF 20% 4V	
				C404	1-164-360-11	CERAMIC CHIP 0.1uF 16V	
				C405	1-164-360-11	CERAMIC CHIP 0.1uF 16V	
				C406	1-164-360-11	CERAMIC CHIP 0.1uF 16V	
				C407	1-164-360-11	CERAMIC CHIP 0.1uF 16V	
				C408	1-164-360-11	CERAMIC CHIP 0.1uF 16V	
				C409	1-164-360-11	CERAMIC CHIP 0.1uF 16V	
				C410	1-104-908-11	TANTAL. CHIP 47uF 20% 4V	
				C411	1-135-163-21	TANTAL. CHIP 47uF 20% 4V	
				C412	1-164-360-11	CERAMIC CHIP 0.1uF 16V	
				C413	1-164-360-11	CERAMIC CHIP 0.1uF 16V	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C414	1-164-360-11	CERAMIC CHIP	0. 1uF 16V	C505	1-135-259-11	TANTAL. CHIP	10uF 20% 6. 3V
C415	1-164-360-11	CERAMIC CHIP	0. 1uF 16V	C509	1-104-847-11	TANTAL. CHIP	22uF 20% 4V
C416	1-164-360-11	CERAMIC CHIP	0. 1uF 16V	C510	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C417	1-164-360-11	CERAMIC CHIP	0. 1uF 16V	C511	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C418	1-164-360-11	CERAMIC CHIP	0. 1uF 16V	C512	1-162-966-11	CERAMIC CHIP	0. 0022uF 10% 50V
C419	1-164-360-11	CERAMIC CHIP	0. 1uF 16V	C517	1-162-918-11	CERAMIC CHIP	18PF 5% 50V
C420	1-164-360-11	CERAMIC CHIP	0. 1uF 16V	C518	1-162-919-11	CERAMIC CHIP	22PF 5% 50V
C421	1-164-360-11	CERAMIC CHIP	0. 1uF 16V	C520	1-165-176-11	CERAMIC CHIP	0. 047uF 10% 16V
C422	1-164-360-11	CERAMIC CHIP	0. 1uF 16V	C521	1-165-176-11	CERAMIC CHIP	0. 047uF 10% 16V
C423	1-164-360-11	CERAMIC CHIP	0. 1uF 16V	C522	1-165-176-11	CERAMIC CHIP	0. 047uF 10% 16V
C424	1-164-360-11	CERAMIC CHIP	0. 1uF 16V	C523	1-165-176-11	CERAMIC CHIP	0. 047uF 10% 16V
C425	1-164-360-11	CERAMIC CHIP	0. 1uF 16V	C524	1-165-176-11	CERAMIC CHIP	0. 047uF 10% 16V
C426	1-164-360-11	CERAMIC CHIP	0. 1uF 16V	C525	1-165-176-11	CERAMIC CHIP	0. 047uF 10% 16V
C428	1-162-964-11	CERAMIC CHIP	0. 1uF 16V	C526	1-165-176-11	CERAMIC CHIP	0. 047uF 10% 16V
C429	1-104-908-11	TANTAL. CHIP	47uF 20% 4V	C527	1-165-176-11	CERAMIC CHIP	0. 047uF 10% 16V
C430	1-164-360-11	CERAMIC CHIP	0. 1uF 16V	C528	1-165-176-11	CERAMIC CHIP	0. 047uF 10% 16V
C431	1-164-360-11	CERAMIC CHIP	0. 1uF 16V	C529	1-165-176-11	CERAMIC CHIP	0. 047uF 10% 16V
C436	1-162-909-11	CERAMIC CHIP	4PF 0. 25PF 50V	C530	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C437	1-162-909-11	CERAMIC CHIP	4PF 0. 25PF 50V	C532	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C439	1-162-964-11	CERAMIC CHIP	0. 001uF 10% 50V	C534	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C440	1-162-964-11	CERAMIC CHIP	0. 001uF 10% 50V	C536	1-104-847-11	TANTAL. CHIP	22uF 20% 4V
C441	1-164-360-11	CERAMIC CHIP	0. 1uF 16V	C537	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C442	1-162-964-11	CERAMIC CHIP	0. 001uF 10% 50V	C538	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C443	1-135-149-21	TANTALUM CHIP	2. 2uF 20% 10V	C539	1-162-966-11	CERAMIC CHIP	0. 0022uF 10% 50V
C444	1-165-176-11	CERAMIC CHIP	0. 047uF 10% 16V	C545	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C445	1-164-360-11	CERAMIC CHIP	0. 1uF 16V	C547	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C447	1-162-915-11	CERAMIC CHIP	10PF 0. 5PF 50V	C556	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C448	1-162-915-11	CERAMIC CHIP	10PF 0. 5PF 50V	C557	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C449	1-162-964-11	CERAMIC CHIP	0. 001uF 10% 50V	C641	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C450	1-135-149-21	TANTALUM CHIP	2. 2uF 20% 10V	C642	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C451	1-165-176-11	CERAMIC CHIP	0. 047uF 10% 16V	C643	1-135-259-11	TANTAL. CHIP	10uF 20% 6. 3V
C452	1-162-964-11	CERAMIC CHIP	0. 001uF 10% 50V	C644	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C453	1-162-964-11	CERAMIC CHIP	0. 001uF 10% 50V	C645	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C455	1-164-360-11	CERAMIC CHIP	0. 1uF 16V	C646	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C456	1-164-360-11	CERAMIC CHIP	0. 1uF 16V	C647	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C457	1-164-360-11	CERAMIC CHIP	0. 1uF 16V	C648	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C458	1-164-360-11	CERAMIC CHIP	0. 1uF 16V	C649	1-162-914-11	CERAMIC CHIP	9PF 0. 5PF 50V
C469	1-104-908-11	TANTAL. CHIP	47uF 20% 4V	C650	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C471	1-164-360-11	CERAMIC CHIP	0. 1uF 16V	C651	1-162-914-11	CERAMIC CHIP	9PF 0. 5PF 50V
C476	1-104-908-11	TANTAL. CHIP	47uF 20% 4V	C652	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C478	1-164-360-11	CERAMIC CHIP	0. 1uF 16V	C653	1-104-908-11	TANTAL. CHIP	47uF 20% 4V
C479	1-104-908-11	TANTAL. CHIP	47uF 20% 4V	C654	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C480	1-104-908-11	TANTAL. CHIP	47uF 20% 4V	C655	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C481	1-104-908-11	TANTAL. CHIP	47uF 20% 4V	C656	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C482	1-162-966-11	CERAMIC CHIP	0. 0022uF 10% 50V	C657	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C483	1-162-915-11	CERAMIC CHIP	10PF 0. 5PF 50V	C658	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C500	1-164-360-11	CERAMIC CHIP	0. 1uF 16V	C659	1-104-908-11	TANTAL. CHIP	47uF 20% 4V
C501	1-164-360-11	CERAMIC CHIP	0. 1uF 16V	C660	1-135-259-11	TANTAL. CHIP	10uF 20% 6. 3V
C502	1-104-851-11	TANTAL. CHIP	10uF 20% 10V	C661	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C504	1-104-847-11	TANTAL. CHIP	22uF 20% 4V	C662	1-104-908-11	TANTAL. CHIP	47uF 20% 4V

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C663	1-164-360-11	CERAMIC CHIP	0.1uF 16V	CN642	1-766-643-21	CONNECTOR, FFC/FPC 7P	
C664	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	CN643	1-573-355-11	CONNECTOR, FFC/FPC 15P	
C665	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	CN700	1-770-496-11	CONNECTOR, SQUARE TYPE 4P	
C667	1-164-360-11	CERAMIC CHIP	0.1uF 16V	< DIODE >			
C668	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V	D401	8-719-041-39	DIODE KV1470	
C669	1-164-360-11	CERAMIC CHIP	0.1uF 16V	D402	8-719-041-39	DIODE KV1470	
C670	1-107-682-11	CERAMIC CHIP	1uF 10% 16V	D403	8-719-027-95	DIODE HSM88WK	
C671	1-164-360-11	CERAMIC CHIP	0.1uF 16V	D404	8-719-027-95	DIODE HSM88WK	
C672	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	D500	8-719-159-96	DIODE RD5.1UM-B	
C673	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	D501	8-719-159-96	DIODE RD5.1UM-B	
C674	1-164-360-11	CERAMIC CHIP	0.1uF 16V	D502	8-719-040-57	DIODE 015Z8.2-XY-TPH3	
C675	1-104-908-11	TANTAL. CHIP	47uF 20% 4V	D503	8-719-040-57	DIODE 015Z8.2-XY-TPH3	
C676	1-164-360-11	CERAMIC CHIP	0.1uF 16V	D504	8-719-040-57	DIODE 015Z8.2-XY-TPH3	
C677	1-164-360-11	CERAMIC CHIP	0.1uF 16V	D505	8-719-040-57	DIODE 015Z8.2-XY-TPH3	
C678	1-164-360-11	CERAMIC CHIP	0.1uF 16V	D507	8-719-421-27	DIODE MA728	
C679	1-164-360-11	CERAMIC CHIP	0.1uF 16V	D508	8-719-046-90	DIODE MA2S111	
C702	1-164-360-11	CERAMIC CHIP	0.1uF 16V	D511	8-719-420-51	DIODE MA729	
C705	1-164-360-11	CERAMIC CHIP	0.1uF 16V	D512	8-719-420-51	DIODE MA729	
C706	1-104-908-11	TANTAL. CHIP	47uF 20% 4V	D513	8-719-421-67	DIODE MA132WK	
C709	1-104-908-11	TANTAL. CHIP	47uF 20% 4V	D641	8-719-041-39	DIODE KV1470	
C710	1-164-360-11	CERAMIC CHIP	0.1uF 16V	D650	8-719-421-59	DIODE MA3130WA	
C711	1-164-360-11	CERAMIC CHIP	0.1uF 16V	D652	8-719-421-59	DIODE MA3130WA	
C712	1-164-360-11	CERAMIC CHIP	0.1uF 16V	D653	8-719-040-57	DIODE 015Z8.2-XY-TPH3	
C713	1-164-360-11	CERAMIC CHIP	0.1uF 16V	D654	8-719-046-90	DIODE MA2S111	
C716	1-104-908-11	TANTAL. CHIP	47uF 20% 4V	D655	8-719-040-57	DIODE 015Z8.2-XY-TPH3	
C717	1-164-360-11	CERAMIC CHIP	0.1uF 16V	< FERRITE BEAD >			
C718	1-164-360-11	CERAMIC CHIP	0.1uF 16V	FB650	1-543-956-21	BEAD, FERRITE (CHIP)	
C719	1-104-908-11	TANTAL. CHIP	47uF 20% 4V	FB651	1-216-864-11	METAL CHIP 0 5% 1/16W	
C720	1-164-360-11	CERAMIC CHIP	0.1uF 16V	FB652	1-543-956-21	BEAD, FERRITE (CHIP)	
C721	1-164-360-11	CERAMIC CHIP	0.1uF 16V	FB653	1-543-956-21	BEAD, FERRITE (CHIP)	
C723	1-164-360-11	CERAMIC CHIP	0.1uF 16V	FB655	1-543-956-21	BEAD, FERRITE (CHIP)	
C724	1-104-908-11	TANTAL. CHIP	47uF 20% 4V	FB656	1-216-864-11	METAL CHIP 0 5% 1/16W	
C725	1-164-360-11	CERAMIC CHIP	0.1uF 16V	< IC >			
C727	1-162-919-11	CERAMIC CHIP	22PF 5% 50V	IC401	8-759-327-31	IC CXD2183R (VX1000E)	
C728	1-162-919-11	CERAMIC CHIP	22PF 5% 50V	IC402	8-759-327-05	IC CXD2184R	
C729	1-107-823-11	CERAMIC CHIP	0.47uF 10% 16V	IC403	8-752-373-89	IC CXD2185R	
C730	1-162-960-11	CERAMIC CHIP	220PF 10% 50V	IC404	8-752-375-34	IC CXK48V818R-T6	
C731	1-107-823-11	CERAMIC CHIP	0.47uF 10% 16V	IC405	8-752-375-34	IC CXK48V818R-T6	
< CONNECTOR >				IC406	8-759-328-28	IC ZA4024	
* CN401	1-770-454-21	CONNECTOR, BOARD TO BOARD 70P		IC408	8-759-327-06	IC CXD2186R	
* CN403	1-770-453-21	CONNECTOR, BOARD TO BOARD 70P		IC409	8-752-871-22	IC CXP911016-007R (NOTE)	
CN500	1-691-489-11	CONNECTOR, FFC/FPC 10P		IC410	8-752-375-05	IC CXD2191R	
CN501	1-766-659-21	CONNECTOR, FFC/FPC 23P		IC411	8-759-337-30	IC uPD482445LGW-B10-E2	
CN502	1-770-543-21	CONNECTOR, FFC/FPC 40P		IC412	8-759-338-77	IC CXD2187R	
CN503	1-691-484-11	CONNECTOR, FFC/FPC 5P		IC500	8-759-298-10	IC S-8423NFS-T2	
CN504	1-766-618-21	CONNECTOR, FFC/FPC 7P		IC501	8-759-366-27	IC MB89098RPFV-G-133-BND	
CN505	1-573-370-21	CONNECTOR, FFC/FPC 30P					
* CN506	1-770-423-21	CONNECTOR, BOARD TO BOARD 34P					
* CN641	1-770-453-21	CONNECTOR, BOARD TO BOARD 70P					

NOTE: Refer to page 4-56 for replacement.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
IC502	8-759-327-60	IC TC7W125FU-TE12R		L643	1-414-398-11	INDUCTOR 10uH	
IC503	8-759-327-60	IC TC7W125FU-TE12R		L644	1-411-273-21	COIL, VARIABLE	
IC504	8-759-357-70	IC HD6433837TA39X (VX1000)		L645	1-414-398-11	INDUCTOR 10uH	
IC504	8-759-357-71	IC HD6433837TA40X (VX1000E)		L646	1-414-398-11	INDUCTOR 10uH	
IC505	8-759-327-65	IC CXD8525N-E2		L654	1-412-939-11	INDUCTOR 1uH	
IC641	8-759-058-58	IC TC7S04FU(TE85R)		L700	1-414-398-11	INDUCTOR 10uH	
IC642	8-759-058-58	IC TC7S04FU(TE85R)		L701	1-414-398-11	INDUCTOR 10uH	
IC643	8-759-327-04	IC CXD2913Q		L702	1-414-398-11	INDUCTOR 10uH	
IC644	8-752-374-96	IC CXD2190R		L703	1-414-398-11	INDUCTOR 10uH	
IC645	8-759-327-01	IC NJM062V(TE2)		L704	1-414-398-11	INDUCTOR 10uH	
IC646	8-759-337-74	IC HM62V256LT8Z				< TRANSISTOR >	
IC700	8-759-369-48	IC HD6433837TA52X		Q500	8-729-427-74	TRANSISTOR XP4601	
IC701	8-759-328-14	IC CXD2194R		Q501	8-729-429-18	TRANSISTOR UN9213	
IC702	8-759-328-15	IC TSBX11LV01PM		Q504	8-729-822-05	TRANSISTOR 2SD1622-ST-TD	
		< COIL >		Q505	8-729-425-50	TRANSISTOR 2SB1462-Q	
L401	1-414-398-11	INDUCTOR 10uH		Q506	8-729-428-88	TRANSISTOR UN9113	
L402	1-410-740-31	INDUCTOR CHIP 0.82uH		Q507	8-729-428-88	TRANSISTOR UN9113	
L403	1-410-378-11	INDUCTOR CHIP 5.6uH		Q508	8-729-427-70	TRANSISTOR XP4401	
L405	1-414-398-11	INDUCTOR 10uH		Q509	8-729-106-60	TRANSISTOR 2SB1115A-YQ	
L406	1-414-398-11	INDUCTOR 10uH		Q641	8-729-427-70	TRANSISTOR XP4401	
L407	1-414-398-11	INDUCTOR 10uH		Q642	8-729-427-72	TRANSISTOR XP4501	
L408	1-414-398-11	INDUCTOR 10uH		Q643	8-729-425-50	TRANSISTOR 2SB1462-Q	
L409	1-414-402-11	INDUCTOR 47uH		Q702	8-729-425-53	TRANSISTOR 2SB1462-R	
L410	1-414-398-11	INDUCTOR 10uH		Q703	8-729-428-88	TRANSISTOR UN9113	
L411	1-414-398-11	INDUCTOR 10uH		Q704	8-729-429-14	TRANSISTOR UN9211	
L500	1-414-398-11	INDUCTOR 10uH		Q705	8-729-425-67	TRANSISTOR 2SD2216-R	
L501	1-414-392-21	INDUCTOR 1uH		Q706	8-729-425-67	TRANSISTOR 2SD2216-R	
L502	1-414-392-21	INDUCTOR 1uH				< RESISTOR >	
L503	1-414-392-21	INDUCTOR 1uH		R401	1-216-864-11	METAL CHIP 0 5% 1/16W (VX1000)	
L504	1-414-392-21	INDUCTOR 1uH		R402	1-216-821-11	METAL CHIP 1K 5% 1/16W	
L505	1-414-392-21	INDUCTOR 1uH		R410	1-216-821-11	METAL CHIP 1K 5% 1/16W	
L506	1-414-398-11	INDUCTOR 10uH		R411	1-216-821-11	METAL CHIP 1K 5% 1/16W	
L507	1-414-398-11	INDUCTOR 10uH		R412	1-216-821-11	METAL CHIP 1K 5% 1/16W	
L508	1-414-398-11	INDUCTOR 10uH		R413	1-216-821-11	METAL CHIP 1K 5% 1/16W	
L509	1-414-398-11	INDUCTOR 10uH		R414	1-216-821-11	METAL CHIP 1K 5% 1/16W	
L510	1-414-392-21	INDUCTOR 1uH		R419	1-216-821-11	METAL CHIP 1K 5% 1/16W	
L511	1-414-392-21	INDUCTOR 1uH		R420	1-216-821-11	METAL CHIP 1K 5% 1/16W	
L512	1-414-392-21	INDUCTOR 1uH		R421	1-216-821-11	METAL CHIP 1K 5% 1/16W	
L513	1-414-392-21	INDUCTOR 1uH		R422	1-216-821-11	METAL CHIP 1K 5% 1/16W	
L514	1-414-392-21	INDUCTOR 1uH		R423	1-216-821-11	METAL CHIP 1K 5% 1/16W	
L515	1-414-392-21	INDUCTOR 1uH		R424	1-216-821-11	METAL CHIP 1K 5% 1/16W	
L516	1-414-392-21	INDUCTOR 1uH		R426	1-216-805-11	METAL CHIP 47 5% 1/16W	
L517	1-414-392-21	INDUCTOR 1uH		R427	1-216-805-11	METAL CHIP 47 5% 1/16W	
L518	1-414-392-21	INDUCTOR 1uH		R428	1-216-833-11	METAL CHIP 10K 5% 1/16W	
L519	1-414-392-21	INDUCTOR 1uH		R429	1-216-833-11	METAL CHIP 10K 5% 1/16W	
L520	1-414-392-21	INDUCTOR 1uH		R430	1-216-817-11	METAL CHIP 470 5% 1/16W	
L521	1-412-951-11	INDUCTOR 10uH		R431	1-216-833-11	METAL CHIP 10K 5% 1/16W	
L641	1-414-398-11	INDUCTOR 10uH		R432	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
L642	1-414-398-11	INDUCTOR 10uH					

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description				Remark
R433	1-216-805-11	METAL CHIP	47	5%	1/16W		R517	1-216-864-11	METAL CHIP	0	5%	1/16W	
R434	1-216-833-11	METAL CHIP	10K	5%	1/16W		R518	1-216-814-11	METAL CHIP	270	5%	1/16W	
R435	1-216-833-11	METAL CHIP	10K	5%	1/16W		R519	1-216-817-11	METAL CHIP	470	5%	1/16W	
R436	1-216-857-11	METAL CHIP	1M	5%	1/16W		R520	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R437	1-216-815-11	METAL CHIP	330	5%	1/16W		R521	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R438	1-216-833-11	METAL CHIP	10K	5%	1/16W		R522	1-216-851-11	METAL CHIP	330K	5%	1/16W	
R439	1-216-829-11	METAL CHIP	4.7K	5%	1/16W		R523	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R440	1-216-833-11	METAL CHIP	10K	5%	1/16W		R524	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R441	1-216-805-11	METAL CHIP	47	5%	1/16W		R525	1-216-857-11	METAL CHIP	1M	5%	1/16W	
R442	1-216-821-11	METAL CHIP	1K	5%	1/16W		R526	1-216-851-11	METAL CHIP	330K	5%	1/16W	
R443	1-216-821-11	METAL CHIP	1K	5%	1/16W		R527	1-216-864-11	METAL CHIP	0	5%	1/16W	
R448	1-216-821-11	METAL CHIP	1K	5%	1/16W		R529	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R449	1-216-864-11	METAL CHIP	0	5%	1/16W		R530	1-216-857-11	METAL CHIP	1M	5%	1/16W	
R451	1-216-864-11	METAL CHIP	0	5%	1/16W		R531	1-216-857-11	METAL CHIP	1M	5%	1/16W	
R453	1-216-864-11	METAL CHIP	0	5%	1/16W		R532	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R454	1-216-845-11	METAL CHIP	100K	5%	1/16W		R536	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R455	1-216-821-11	METAL CHIP	1K	5%	1/16W		R537	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R456	1-216-833-11	METAL CHIP	10K	5%	1/16W		R538	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R457	1-216-864-11	METAL CHIP	0	5%	1/16W		R539	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R458	1-216-864-11	METAL CHIP	0	5%	1/16W		R540	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R459	1-216-864-11	METAL CHIP	0	5%	1/16W		R541	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R460	1-216-864-11	METAL CHIP	0	5%	1/16W		R542	1-216-864-11	METAL CHIP	0	5%	1/16W	
R462	1-216-864-11	METAL CHIP	0	5%	1/16W		R543	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R466	1-216-864-11	METAL CHIP	0	5%	1/16W		R544	1-216-864-11	METAL CHIP	0	5%	1/16W	
R467	1-216-805-11	METAL CHIP	47	5%	1/16W		R545	1-216-823-11	METAL CHIP	1.5K	5%	1/16W	
R468	1-216-821-11	METAL CHIP	1K	5%	1/16W		R547	1-216-864-11	METAL CHIP	0	5%	1/16W	
R469	1-216-821-11	METAL CHIP	1K	5%	1/16W		R550	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R470	1-216-821-11	METAL CHIP	1K	5%	1/16W		R551	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R471	1-216-821-11	METAL CHIP	1K	5%	1/16W		R552	1-216-838-11	METAL CHIP	27K	5%	1/16W	
R472	1-216-821-11	METAL CHIP	1K	5%	1/16W		R555	1-216-864-11	METAL CHIP	0	5%	1/16W	
R473	1-216-821-11	METAL CHIP	1K	5%	1/16W		R559	1-216-809-11	METAL CHIP	100	5%	1/16W	
R474	1-216-821-11	METAL CHIP	1K	5%	1/16W		R560	1-216-817-11	METAL CHIP	470	5%	1/16W	
R475	1-216-821-11	METAL CHIP	1K	5%	1/16W		R563	1-216-864-11	METAL CHIP	0	5%	1/16W	
R476	1-216-821-11	METAL CHIP	1K	5%	1/16W		R564	1-216-864-11	METAL CHIP	0	5%	1/16W	
R477	1-216-821-11	METAL CHIP	1K	5%	1/16W		R565	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R478	1-216-817-11	METAL CHIP	470	5%	1/16W		R568	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R500	1-216-826-11	METAL CHIP	2.7K	5%	1/16W		R569	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R501	1-216-841-11	METAL CHIP	47K	5%	1/16W		R570	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R503	1-216-841-11	METAL CHIP	47K	5%	1/16W		R571	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R504	1-216-833-11	METAL CHIP	10K	5%	1/16W		R572	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R505	1-216-843-11	METAL CHIP	68K	5%	1/16W		R573	1-216-817-11	METAL CHIP	470	5%	1/16W	
R506	1-216-847-11	METAL CHIP	150K	5%	1/16W		R574	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R507	1-216-864-11	METAL CHIP	0	5%	1/16W		R575	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R508	1-216-829-11	METAL CHIP	4.7K	5%	1/16W		R576	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R510	1-216-845-11	METAL CHIP	100K	5%	1/16W		R577	1-216-864-11	METAL CHIP	0	5%	1/16W	
R511	1-216-821-11	METAL CHIP	1K	5%	1/16W		R578	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R512	1-216-841-11	METAL CHIP	47K	5%	1/16W		R579	1-216-857-11	METAL CHIP	1M	5%	1/16W	
R514	1-216-821-11	METAL CHIP	1K	5%	1/16W		R580	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R515	1-216-821-11	METAL CHIP	1K	5%	1/16W		R581	1-216-864-11	METAL CHIP	0	5%	1/16W	
R516	1-216-821-11	METAL CHIP	1K	5%	1/16W		R583	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R584	1-216-829-11	METAL CHIP	4. 7K 5% 1/16W	R678	1-216-841-11	METAL CHIP	47K 5% 1/16W
R585	1-216-829-11	METAL CHIP	4. 7K 5% 1/16W	R681	1-216-821-11	METAL CHIP	1K 5% 1/16W
R586	1-216-821-11	METAL CHIP	1K 5% 1/16W	R700	1-216-833-11	METAL CHIP	10K 5% 1/16W
R587	1-216-864-11	METAL CHIP	0 5% 1/16W	R702	1-216-822-11	METAL CHIP	1. 2K 5% 1/16W
R588	1-216-821-11	METAL CHIP	1K 5% 1/16W	R703	1-216-845-11	METAL CHIP	100K 5% 1/16W
R589	1-216-821-11	METAL CHIP	1K 5% 1/16W	R704	1-216-833-11	METAL CHIP	10K 5% 1/16W
R590	1-216-864-11	METAL CHIP	0 5% 1/16W	R705	1-216-833-11	METAL CHIP	10K 5% 1/16W
R594	1-216-821-11	METAL CHIP	1K 5% 1/16W	R706	1-218-272-11	METAL GLAZE	5. 1K 5% 1/16W
R595	1-216-821-11	METAL CHIP	1K 5% 1/16W	R707	1-216-833-11	METAL CHIP	10K 5% 1/16W
R596	1-216-821-11	METAL CHIP	1K 5% 1/16W	R708	1-216-833-11	METAL CHIP	10K 5% 1/16W
R597	1-216-838-11	METAL CHIP	27K 5% 1/16W	R709	1-216-821-11	METAL CHIP	1K 5% 1/16W
R600	1-216-864-11	METAL CHIP	0 5% 1/16W	R710	1-216-864-11	METAL CHIP	0 5% 1/16W
R601	1-216-809-11	METAL CHIP	100 5% 1/16W	R715	1-216-833-11	METAL CHIP	10K 5% 1/16W
R602	1-216-809-11	METAL CHIP	100 5% 1/16W	R720	1-216-829-11	METAL CHIP	4. 7K 5% 1/16W
R603	1-216-827-11	METAL CHIP	3. 3K 5% 1/16W	R725	1-216-817-11	METAL CHIP	470 5% 1/16W
R604	1-216-827-11	METAL CHIP	3. 3K 5% 1/16W	R726	1-216-805-11	METAL CHIP	47 5% 1/16W
R605	1-216-827-11	METAL CHIP	3. 3K 5% 1/16W	R727	1-216-833-11	METAL CHIP	10K 5% 1/16W
R606	1-216-830-11	METAL CHIP	5. 6K 5% 1/16W	R732	1-218-873-11	METAL CHIP	12K 0. 50% 1/16W
R607	1-216-823-11	METAL CHIP	1. 5K 5% 1/16W	R735	1-216-864-11	METAL CHIP	0 5% 1/16W
R608	1-216-829-11	METAL CHIP	4. 7K 5% 1/16W	R736	1-218-873-11	METAL CHIP	12K 0. 50% 1/16W
R609	1-216-138-00	METAL CHIP	3. 3 5% 1/8W	R737	1-218-272-11	METAL GLAZE	5. 1K 5% 1/16W
R610	1-216-825-11	METAL CHIP	2. 2K 5% 1/16W	R738	1-211-987-11	METAL GLAZE	56 0. 50% 1/16W
R641	1-216-845-11	METAL CHIP	100K 5% 1/16W	R739	1-211-987-11	METAL GLAZE	56 0. 50% 1/16W
R642	1-216-864-11	METAL CHIP	0 5% 1/16W	R740	1-211-987-11	METAL GLAZE	56 0. 50% 1/16W
R643	1-216-864-11	METAL CHIP	0 5% 1/16W	R741	1-211-987-11	METAL GLAZE	56 0. 50% 1/16W
R645	1-216-864-11	METAL CHIP	0 5% 1/16W	R742	1-216-833-11	METAL CHIP	10K 5% 1/16W
R648	1-216-821-11	METAL CHIP	1K 5% 1/16W	R747	1-216-837-11	METAL CHIP	22K 5% 1/16W
R649	1-216-821-11	METAL CHIP	1K 5% 1/16W	R748	1-216-815-11	METAL CHIP	330 5% 1/16W
R651	1-216-841-11	METAL CHIP	47K 5% 1/16W	R749	1-216-833-11	METAL CHIP	10K 5% 1/16W
R652	1-216-821-11	METAL CHIP	1K 5% 1/16W	R750	1-216-864-11	METAL CHIP	0 5% 1/16W
R653	1-216-821-11	METAL CHIP	1K 5% 1/16W	R751	1-216-833-11	METAL CHIP	10K 5% 1/16W
R655	1-216-857-11	METAL CHIP	1M 5% 1/16W	R752	1-216-864-11	METAL CHIP	0 5% 1/16W
R656	1-216-815-11	METAL CHIP	330 5% 1/16W	R753	1-216-864-11	METAL CHIP	0 5% 1/16W
R657	1-216-821-11	METAL CHIP	1K 5% 1/16W	R754	1-216-864-11	METAL CHIP	0 5% 1/16W
R658	1-216-821-11	METAL CHIP	1K 5% 1/16W	R755	1-216-864-11	METAL CHIP	0 5% 1/16W
R659	1-216-864-11	METAL CHIP	0 5% 1/16W	R756	1-216-864-11	METAL CHIP	0 5% 1/16W
R661	1-216-821-11	METAL CHIP	1K 5% 1/16W	R757	1-216-864-11	METAL CHIP	0 5% 1/16W
R663	1-216-829-11	METAL CHIP	4. 7K 5% 1/16W	R758	1-216-864-11	METAL CHIP	0 5% 1/16W
R664	1-216-849-11	METAL CHIP	220K 5% 1/16W	R759	1-216-864-11	METAL CHIP	0 5% 1/16W
R665	1-216-833-11	METAL CHIP	10K 5% 1/16W	R760	1-216-864-11	METAL CHIP	0 5% 1/16W
R666	1-216-825-11	METAL CHIP	2. 2K 5% 1/16W	R762	1-216-857-11	METAL CHIP	1M 5% 1/16W
R668	1-216-841-11	METAL CHIP	47K 5% 1/16W	R763	1-216-845-11	METAL CHIP	100K 5% 1/16W
R669	1-216-841-11	METAL CHIP	47K 5% 1/16W	R764	1-216-833-11	METAL CHIP	10K 5% 1/16W
R671	1-216-841-11	METAL CHIP	47K 5% 1/16W	< COMPOSITION CIRCUIT BLOCK >			
R672	1-216-821-11	METAL CHIP	1K 5% 1/16W	RB401	1-236-971-11	NETWORK, RES 0 (VX1000)	
R673	1-216-864-11	METAL CHIP	0 5% 1/16W	RB402	1-236-971-11	NETWORK, RES 0 (VX1000)	
R674	1-216-845-11	METAL CHIP	100K 5% 1/16W	RB403	1-236-971-11	NETWORK, RES 0 (VX1000)	
R675	1-216-842-11	METAL CHIP	56K 5% 1/16W	RB404	1-236-971-11	NETWORK, RES 0 (VX1000)	
R676	1-216-841-11	METAL CHIP	47K 5% 1/16W	RB500	1-236-436-11	NETWORK, RES 100K	
R677	1-216-841-11	METAL CHIP	47K 5% 1/16W				

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
RB501	1-236-907-11	NETWORK, RES 100K		*	A-7072-221-A	JK-126 BOARD, COMPLETE	
RB502	1-236-907-11	NETWORK, RES 100K				*****	
RB503	1-236-412-11	NETWORK, RES 1.0K				(Ref.No. 5,000 Series)	
RB504	1-236-904-11	NETWORK, RES 1.0K				< CAPACITOR >	
RB505	1-236-904-11	NETWORK, RES 1.0K		C200	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
RB506	1-236-412-11	NETWORK, RES 1.0K				< DIODE >	
RB507	1-236-424-11	NETWORK, RES 10K		D200	8-719-421-59	DIODE MA3130WA	
RB508	1-236-904-11	NETWORK, RES 1.0K		D201	8-719-421-59	DIODE MA3130WA	
RB509	1-236-904-11	NETWORK, RES 1.0K		D202	8-719-421-59	DIODE MA3130WA	
RB510	1-236-904-11	NETWORK, RES 1.0K		D203	8-719-421-59	DIODE MA3130WA	
RB511	1-236-908-11	NETWORK, RES 10K		D204	8-719-421-59	DIODE MA3130WA	
RB512	1-236-904-11	NETWORK, RES 1.0K		D205	8-719-420-14	DIODE MA8082-M	
RB513	1-236-904-11	NETWORK, RES 1.0K		D206	8-719-420-14	DIODE MA8082-M	
RB514	1-236-412-11	NETWORK, RES 1.0K				< JACK >	
RB515	1-236-904-11	NETWORK, RES 1.0K		J200	1-537-747-21	TERMINAL BOARD (VIDEO/AUDIO OUT)	
RB516	1-236-412-11	NETWORK, RES 1.0K				< COIL >	
RB517	1-236-971-11	NETWORK, RES 0		L200	1-543-956-21	BEAD, FERRITE (CHIP)	
RB518	1-236-971-11	NETWORK, RES 0		L201	1-543-956-21	BEAD, FERRITE (CHIP)	
RB519	1-236-904-11	NETWORK, RES 1.0K				< RESISTOR >	
RB520	1-236-971-11	NETWORK, RES 0		R200	1-216-864-11	METAL CHIP 0 5% 1/16W	
RB521	1-236-907-11	NETWORK, RES 100K		R201	1-216-864-11	METAL CHIP 0 5% 1/16W	
RB522	1-236-412-11	NETWORK, RES 1.0K				< FLEXIBLE BOARD >	
RB523	1-236-904-11	NETWORK, RES 1.0K		W200	1-656-398-11	FP-214 BOARD	
RB524	1-236-904-11	NETWORK, RES 1.0K					
RB525	1-236-971-11	NETWORK, RES 0					
RB526	1-236-412-11	NETWORK, RES 1.0K					
RB527	1-236-904-11	NETWORK, RES 1.0K					
RB641	1-236-440-11	NETWORK, RES 220K					
RB642	1-236-440-11	NETWORK, RES 220K					
RB643	1-236-432-11	NETWORK, RES 47K					
RB644	1-236-432-11	NETWORK, RES 47K					
RB701	1-236-908-11	NETWORK, RES 10K					
RB702	1-236-908-11	NETWORK, RES 10K					
RB703	1-236-908-11	NETWORK, RES 10K					
RB704	1-236-908-11	NETWORK, RES 10K					
RB705	1-236-908-11	NETWORK, RES 10K					
RB706	1-236-908-11	NETWORK, RES 10K					
		< VIBRATOR >		*	A-7056-435-A	LD-75 BOARD, COMPLETE	
X401	1-760-654-21	VIBRATOR, CRYSTAL (13.5MHz)				*****	
X402	1-760-655-21	VIBRATOR, CRYSTAL (20MHz)				(Ref.No. 1,000 Series)	
X500	1-579-369-21	VIBRATOR (10MHz)				< CAPACITOR >	
X501	1-760-458-21	VIBRATOR, CRYSTAL (32kHz)		C302	1-164-360-11	CERAMIC CHIP 0.1uF 16V	
X502	1-760-497-21	VIBRATOR, LITHIUM NIOBATE (6MHz)		C303	1-165-176-11	CERAMIC CHIP 0.047uF 10% 16V	
X641	1-579-922-11	VIBRATOR, CRYSTAL (CHIP TYPE) (24.576MHz)		C304	1-165-176-11	CERAMIC CHIP 0.047uF 10% 16V	
X700	1-760-497-21	VIBRATOR, LITHIUM NIOBATE (6MHz)		C305	1-164-677-11	CERAMIC CHIP 0.033uF 10% 16V	
X701	1-579-922-11	VIBRATOR, CRYSTAL (CHIP TYPE) (24.576MHz)		C306	1-164-677-11	CERAMIC CHIP 0.033uF 10% 16V	
				C307	1-164-227-11	CERAMIC CHIP 0.022uF 10% 25V	
				C308	1-162-967-11	CERAMIC CHIP 0.0033uF 10% 50V	
				C309	1-162-967-11	CERAMIC CHIP 0.0033uF 10% 50V	
				C310	1-164-227-11	CERAMIC CHIP 0.022uF 10% 25V	
				C311	1-162-968-11	CERAMIC CHIP 0.0047uF 10% 50V	
				C312	1-162-968-11	CERAMIC CHIP 0.0047uF 10% 50V	
				C315	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	
				C316	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
C317	1-135-181-21	TANTALUM CHIP	4.7uF 20% 6.3V	IC304	8-759-058-41	IC NJM3416V	
C319	1-135-201-11	TANTALUM CHIP	10uF 20% 4V	IC305	8-759-075-97	IC LM358PW	
C320	1-135-181-21	TANTALUM CHIP	4.7uF 20% 6.3V	IC306	8-759-248-78	IC MB88102PFV-G-BND-ER	
C321	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	IC307	8-752-865-19	IC CXP81120-012R	
C322	1-135-151-21	TANTALUM CHIP	4.7uF 20% 4V	IC308	8-759-059-03	IC LM324PW	
C324	1-164-677-11	CERAMIC CHIP	0.033uF 10% 16V	IC309	8-759-823-51	IC LB1830M	
C325	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	IC310	8-759-327-33	IC BU9241FS-E2	
C326	1-162-974-11	CERAMIC CHIP	0.01uF 50V	IC311	8-759-351-46	IC MPC17A34RVMEL	
C327	1-164-360-11	CERAMIC CHIP	0.1uF 16V	IC312	8-752-365-65	IC CXD2126N-T4	
C328	1-162-974-11	CERAMIC CHIP	0.01uF 50V	IC313	8-759-050-50	IC SN74HCT04APW-E05	
C330	1-135-149-21	TANTALUM CHIP	2.2uF 20% 10V	< COIL >			
C331	1-162-974-11	CERAMIC CHIP	0.01uF 50V	L301	1-410-993-11	INDUCTOR CHIP 1uH	
C333	1-164-489-11	CERAMIC CHIP	0.22uF 10% 16V	L302	1-410-993-11	INDUCTOR CHIP 1uH	
C334	1-164-346-11	CERAMIC CHIP	1uF 16V	L303	1-414-398-11	INDUCTOR 10uH	
C335	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	L304	1-414-398-11	INDUCTOR 10uH	
C336	1-162-974-11	CERAMIC CHIP	0.01uF 50V	L305	1-414-398-11	INDUCTOR 10uH	
C337	1-135-151-21	TANTALUM CHIP	4.7uF 20% 4V	L306	1-414-398-11	INDUCTOR 10uH	
C338	1-135-151-21	TANTALUM CHIP	4.7uF 20% 4V	L307	1-414-398-11	INDUCTOR 10uH	
C339	1-164-346-11	CERAMIC CHIP	1uF 16V	L308	1-414-392-21	INDUCTOR 1uH	
C340	1-162-974-11	CERAMIC CHIP	0.01uF 50V	L309	1-414-392-21	INDUCTOR 1uH	
C341	1-135-149-21	TANTALUM CHIP	2.2uF 20% 10V	L310	1-414-398-11	INDUCTOR 10uH	
C342	1-162-923-11	CERAMIC CHIP	47PF 5% 50V	L311	1-414-398-11	INDUCTOR 10uH	
C343	1-104-752-11	TANTAL. CHIP	33uF 20% 6.3V	L312	1-414-398-11	INDUCTOR 10uH	
C344	1-165-128-11	CERAMIC CHIP	0.22uF 16V	L315	1-414-404-11	INDUCTOR 100uH	
C345	1-162-974-11	CERAMIC CHIP	0.01uF 50V	< TRANSISTOR >			
C346	1-162-974-11	CERAMIC CHIP	0.01uF 50V	Q301	8-729-429-01	TRANSISTOR UN9119	
C347	1-162-974-11	CERAMIC CHIP	0.01uF 50V	Q302	8-729-429-01	TRANSISTOR UN9119	
C348	1-104-752-11	TANTAL. CHIP	33uF 20% 6.3V	Q303	8-729-425-64	TRANSISTOR 2SD2216-Q	
C349	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	Q304	8-729-425-64	TRANSISTOR 2SD2216-Q	
C350	1-135-151-21	TANTALUM CHIP	4.7uF 20% 4V	Q305	8-729-427-70	TRANSISTOR XP4401	
C351	1-162-974-11	CERAMIC CHIP	0.01uF 50V	Q306	8-729-429-18	TRANSISTOR UN9213	
C352	1-164-360-11	CERAMIC CHIP	0.1uF 16V	< RESISTOR >			
C390	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V	R301	1-218-851-11	METAL CHIP 1.5K 0.50% 1/16W	
< CONNECTOR >				R302	1-218-851-11	METAL CHIP 1.5K 0.50% 1/16W	
CN301	1-750-358-21	CONNECTOR, FFC/FPC (ZIF) 30P		R303	1-216-837-11	METAL CHIP 22K 5% 1/16W	
CN302	1-766-833-21	CONNECTOR, FFC/FPC (ZIF) 21P		R304	1-216-837-11	METAL CHIP 22K 5% 1/16W	
CN304	1-750-361-21	CONNECTOR, FFC/FPC (ZIF) 30P		R305	1-216-837-11	METAL CHIP 22K 5% 1/16W	
< DIODE >				R306	1-216-837-11	METAL CHIP 22K 5% 1/16W	
D301	8-719-050-49	DIODE RD9.1UM-B		R307	1-218-871-11	METAL CHIP 10K 0.50% 1/16W	
D302	8-719-050-49	DIODE RD9.1UM-B		R308	1-218-871-11	METAL CHIP 10K 0.50% 1/16W	
D303	8-719-050-49	DIODE RD9.1UM-B		R309	1-218-871-11	METAL CHIP 10K 0.50% 1/16W	
D304	8-719-050-49	DIODE RD9.1UM-B		R310	1-218-895-11	METAL CHIP 100K 0.50% 1/16W	
D305	8-719-050-49	DIODE RD9.1UM-B		R311	1-218-853-11	METAL CHIP 1.8K 0.50% 1/16W	
< IC >				R312	1-218-871-11	METAL CHIP 10K 0.50% 1/16W	
IC301	8-759-058-45	IC NJM3403AV		R313	1-218-895-11	METAL CHIP 100K 0.50% 1/16W	
IC302	8-759-059-03	IC LM324PW		R314	1-218-853-11	METAL CHIP 1.8K 0.50% 1/16W	
IC303	8-759-058-41	IC NJM3416V		R315	1-218-895-11	METAL CHIP 100K 0.50% 1/16W	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R316	1-218-895-11	METAL CHIP	100K 0.50% 1/16W	R391	1-218-871-11	METAL CHIP 10K 0.50% 1/16W	
R317	1-218-869-11	METAL CHIP	8.2K 0.50% 1/16W			< VIBRATOR >	
R318	1-218-869-11	METAL CHIP	8.2K 0.50% 1/16W				
R319	1-218-875-11	METAL CHIP	15K 0.50% 1/16W	X301	1-579-553-11	VIBRATOR (12MHz)	
R320	1-218-895-11	METAL CHIP	100K 0.50% 1/16W				
R321	1-218-903-11	METAL CHIP	220K 0.50% 1/16W				
R322	1-218-903-11	METAL CHIP	220K 0.50% 1/16W				
R323	1-218-895-11	METAL CHIP	100K 0.50% 1/16W	*	A-7072-229-A	LI-49 BOARD, COMPLETE	
R324	1-218-875-11	METAL CHIP	15K 0.50% 1/16W			*****	
R327	1-216-001-00	METAL CHIP	10 5% 1/10W			(Ref. No. 8,000 Series)	
R328	1-218-887-11	METAL CHIP	47K 0.50% 1/16W			< CONNECTOR >	
R329	1-218-887-11	METAL CHIP	47K 0.50% 1/16W				
R331	1-216-821-11	METAL CHIP	1K 5% 1/16W	CN600	1-770-544-21	CONNECTOR, FFC/FPC 50P	
R334	1-216-825-11	METAL CHIP	2.2K 5% 1/16W	CN601	1-770-545-21	CONNECTOR, FFC/FPC 34P	
R335	1-216-845-11	METAL CHIP	100K 5% 1/16W	* CN602	1-770-572-21	CONNECTOR, BOARD TO BOARD 30P	
R337	1-216-848-11	METAL CHIP	180K 5% 1/16W			< DIODE >	
R338	1-216-851-11	METAL CHIP	330K 5% 1/16W				
R339	1-216-836-11	METAL CHIP	18K 5% 1/16W	D605	8-719-989-53	DIODE CL-200HR-C-TSL	
R340	1-216-830-11	METAL CHIP	5.6K 5% 1/16W			< BATTERY HOLDER >	
R341	1-216-848-11	METAL CHIP	180K 5% 1/16W				
R344	1-216-841-11	METAL CHIP	47K 5% 1/16W	LI600	1-550-104-32	HOLDER, BATTERY	
R345	1-216-815-11	METAL CHIP	330 5% 1/16W			< RESISTOR >	
R346	1-216-837-11	METAL CHIP	22K 5% 1/16W				
R348	1-216-837-11	METAL CHIP	22K 5% 1/16W	R650	1-216-809-11	METAL CHIP 100 5% 1/16W	
R349	1-216-833-11	METAL CHIP	10K 5% 1/16W	R651	1-216-838-11	METAL CHIP 27K 5% 1/16W	
R350	1-216-822-11	METAL CHIP	1.2K 5% 1/16W	R652	1-216-832-11	METAL CHIP 8.2K 5% 1/16W	
R355	1-216-837-11	METAL CHIP	22K 5% 1/16W	R653	1-216-828-11	METAL CHIP 3.9K 5% 1/16W	
R356	1-216-837-11	METAL CHIP	22K 5% 1/16W	R654	1-216-826-11	METAL CHIP 2.7K 5% 1/16W	
R361	1-216-848-11	METAL CHIP	180K 5% 1/16W			< SWITCH >	
R362	1-216-833-11	METAL CHIP	10K 5% 1/16W				
R363	1-216-848-11	METAL CHIP	180K 5% 1/16W	S600	1-572-473-11	SWITCH, TACTIL (PROGRAM)	
R364	1-216-833-11	METAL CHIP	10K 5% 1/16W	S601	1-572-473-11	SWITCH, TACTIL (SHUTTER SPEED)	
R365	1-216-821-11	METAL CHIP	1K 5% 1/16W	S602	1-572-473-11	SWITCH, TACTIL (WHT BAL)	
R366	1-216-845-11	METAL CHIP	100K 5% 1/16W	S603	1-572-473-11	SWITCH, TACTIL (REC LEVEL)	
R369	1-216-833-11	METAL CHIP	10K 5% 1/16W	S604	1-572-922-11	SWITCH, SLIDE (STEADY SHOT)	
R370	1-216-835-11	METAL CHIP	15K 5% 1/16W				
R371	1-216-838-11	METAL CHIP	27K 5% 1/16W	S605	1-572-922-11	SWITCH, SLIDE (DIGITAL MODE)	
R372	1-216-829-11	METAL CHIP	4.7K 5% 1/16W				
R373	1-216-134-00	METAL CHIP	2.2 5% 1/8W				
R374	1-216-827-11	METAL CHIP	3.3K 5% 1/16W	*	A-7066-436-A	MA-219 BOARD, COMPLETE	
R375	1-216-814-11	METAL CHIP	270 5% 1/16W			*****	
R376	1-216-857-11	METAL CHIP	1M 5% 1/16W			(Ref. No. 6,000 Series)	
R377	1-216-841-11	METAL CHIP	47K 5% 1/16W			< CAPACITOR >	
R378	1-216-841-11	METAL CHIP	47K 5% 1/16W				
R379	1-216-821-11	METAL CHIP	1K 5% 1/16W	C500	1-135-259-11	TANTAL. CHIP 10uF 20% 6.3V	
R380	1-216-821-11	METAL CHIP	1K 5% 1/16W	C501	1-164-360-11	CERAMIC CHIP 0.1uF 16V	
R381	1-216-842-11	METAL CHIP	56K 5% 1/16W	C502	1-164-360-11	CERAMIC CHIP 0.1uF 16V	
R382	1-216-821-11	METAL CHIP	1K 5% 1/16W	C503	1-164-360-11	CERAMIC CHIP 0.1uF 16V	
R383	1-216-837-11	METAL CHIP	22K 5% 1/16W	C504	1-135-181-21	TANTALUM CHIP 4.7uF 20% 6.3V	
R390	1-218-887-11	METAL CHIP	47K 0.50% 1/16W	C505	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
				C506	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
C507	1-162-927-11	CERAMIC CHIP	100PF 5% 50V			< COIL >	
C508	1-162-927-11	CERAMIC CHIP	100PF 5% 50V				
C509	1-164-299-11	CERAMIC CHIP	0.22uF 10% 25V	L500	1-412-939-11	INDUCTOR 1uH	
C510	1-164-299-11	CERAMIC CHIP	0.22uF 10% 25V	L501	1-412-939-11	INDUCTOR 1uH	
C511	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	L502	1-412-939-11	INDUCTOR 1uH	
C512	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	L503	1-412-939-11	INDUCTOR 1uH	
C513	1-164-360-11	CERAMIC CHIP	0.1uF 16V	L505	1-412-939-11	INDUCTOR 1uH	
C514	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	L506	1-412-939-11	INDUCTOR 1uH	
C515	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	L507	1-412-939-11	INDUCTOR 1uH	
C516	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V	L508	1-412-939-11	INDUCTOR 1uH	
C517	1-135-181-21	TANTALUM CHIP	4.7uF 20% 6.3V	L509	1-414-398-11	INDUCTOR 10uH	
C518	1-135-091-91	TANTAL. CHIP	1uF 20% 16V			< TRANSISTOR >	
C519	1-135-091-91	TANTAL. CHIP	1uF 20% 16V	Q500	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
C520	1-135-149-21	TANTALUM CHIP	2.2uF 20% 10V	Q501	8-729-402-81	TRANSISTOR XN4501	
C521	1-164-360-11	CERAMIC CHIP	0.1uF 16V	Q502	8-729-402-81	TRANSISTOR XN4501	
C522	1-135-091-91	TANTAL. CHIP	1uF 20% 16V	Q503	8-729-420-20	TRANSISTOR XN4312	
C523	1-135-091-91	TANTAL. CHIP	1uF 20% 16V	Q504	8-729-905-23	TRANSISTOR 2SA1576-R	
C524	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V	Q505	8-729-403-24	TRANSISTOR XN4210	
C525	1-164-360-11	CERAMIC CHIP	0.1uF 16V	Q506	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
C526	1-164-360-11	CERAMIC CHIP	0.1uF 16V	Q507	8-729-402-42	TRANSISTOR UN5213	
C527	1-135-149-21	TANTALUM CHIP	2.2uF 20% 10V	Q508	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
C528	1-164-360-11	CERAMIC CHIP	0.1uF 16V			< RESISTOR >	
C529	1-164-315-11	CERAMIC CHIP	470PF 5% 50V	R500	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
		< CONNECTOR >		R501	1-216-841-11	METAL CHIP 47K 5% 1/16W	
CN500	1-766-622-21	CONNECTOR, FFC/FPC 11P		R502	1-216-845-11	METAL CHIP 100K 5% 1/16W	
CN501	1-766-618-21	CONNECTOR, FFC/FPC 7P		R503	1-218-853-11	METAL CHIP 1.8K 0.50% 1/16W	
CN502	1-766-621-21	CONNECTOR, FFC/FPC 10P		R504	1-218-887-11	METAL CHIP 47K 0.50% 1/16W	
CN503	1-573-351-11	CONNECTOR, FFC/FPC (ZIF) 11P		R505	1-218-887-11	METAL CHIP 47K 0.50% 1/16W	
		< DIODE >		R506	1-218-887-11	METAL CHIP 47K 0.50% 1/16W	
D501	8-719-422-70	DIODE MA8075		R507	1-216-841-11	METAL CHIP 47K 5% 1/16W	
D502	8-719-422-70	DIODE MA8075		R508	1-216-864-11	METAL CHIP 0 5% 1/16W	
D503	8-719-422-70	DIODE MA8075		R509	1-216-842-11	METAL CHIP 56K 5% 1/16W	
D504	8-719-422-70	DIODE MA8075		R510	1-216-842-11	METAL CHIP 56K 5% 1/16W	
D505	8-719-027-48	DIODE MA142WA		R511	1-218-889-11	METAL CHIP 56K 0.50% 1/16W	
D506	8-719-027-48	DIODE MA142WA		R512	1-218-889-11	METAL CHIP 56K 0.50% 1/16W	
D507	8-719-045-87	DIODE MA4Z082WA		R513	1-216-845-11	METAL CHIP 100K 5% 1/16W	
D508	8-719-045-87	DIODE MA4Z082WA		R515	1-218-853-11	METAL CHIP 1.8K 0.50% 1/16W	
D509	8-719-404-49	DIODE MA111		R516	1-218-887-11	METAL CHIP 47K 0.50% 1/16W	
D510	8-719-422-70	DIODE MA8075		R517	1-218-883-11	METAL CHIP 33K 0.50% 1/16W	
D511	8-719-422-70	DIODE MA8075		R518	1-216-849-11	METAL CHIP 220K 5% 1/16W	
		< FERRITE BEAD >		R519	1-216-845-11	METAL CHIP 100K 5% 1/16W	
FB501	1-543-960-21	BEAD, FERRITE (CHIP)		R520	1-216-841-11	METAL CHIP 47K 5% 1/16W	
		< IC >		R521	1-218-875-11	METAL CHIP 15K 0.50% 1/16W	
IC500	8-759-111-56	IC uPC4572G2		R522	1-216-841-11	METAL CHIP 47K 5% 1/16W	
IC501	8-759-111-56	IC uPC4572G2		R523	1-216-840-11	METAL CHIP 39K 5% 1/16W	
				R524	1-216-833-11	METAL CHIP 10K 5% 1/16W	
				R525	1-216-831-11	METAL CHIP 6.8K 5% 1/16W	
				R526	1-216-841-11	METAL CHIP 47K 5% 1/16W	
				R527	1-216-841-11	METAL CHIP 47K 5% 1/16W	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R528	1-218-883-11	METAL CHIP 33K 0.50% 1/16W		C926	1-162-974-11	CERAMIC CHIP 0.01uF	50V
R529	1-216-845-11	METAL CHIP 100K 5% 1/16W				< CONNECTOR >	
R530	1-216-841-11	METAL CHIP 47K 5% 1/16W		* CN901	1-691-549-21	CONNECTOR, BOARD TO BOARD 48P	
R531	1-216-849-11	METAL CHIP 220K 5% 1/16W				< IC >	
R532	1-218-875-11	METAL CHIP 15K 0.50% 1/16W		IC901	8-759-327-02	IC CXD2171R-T6	
R533	1-216-841-11	METAL CHIP 47K 5% 1/16W		IC902	8-752-365-06	IC CXK48324R-1	
R534	1-216-831-11	METAL CHIP 6.8K 5% 1/16W		IC903	8-752-376-25	IC CXK1206ATM-1-T6	
R535	1-216-831-11	METAL CHIP 6.8K 5% 1/16W		IC904	8-752-374-63	IC CXD2174R	
R536	1-216-864-11	METAL CHIP 0 5% 1/16W		IC905	8-752-365-06	IC CXK48324R-1	
R538	1-216-864-11	METAL CHIP 0 5% 1/16W		IC906	8-752-376-25	IC CXK1206ATM-1-T6	
R540	1-216-864-11	METAL CHIP 0 5% 1/16W		IC907	8-752-375-93	IC CXD2173R	
		< COMPOSITION CIRCUIT BLOCK >				< COIL >	
RB500	1-236-425-11	NETWORK, RES 12K		L901	1-414-398-11	INDUCTOR 10uH	
RB501	1-236-432-11	NETWORK, RES 47K		L902	1-414-398-11	INDUCTOR 10uH	
RB502	1-236-433-11	NETWORK, RES 56K		L903	1-414-398-11	INDUCTOR 10uH	
RB503	1-236-436-11	NETWORK, RES 100K		L904	1-414-398-11	INDUCTOR 10uH	
				L905	1-414-398-11	INDUCTOR 10uH	
* A-7072-219-A	MG-16	BOARD, COMPLETE		L906	1-414-398-11	INDUCTOR 10uH	
		*****		L907	1-414-398-11	INDUCTOR 10uH	
		(Ref. No. 2,000 Series)		L908	1-414-392-21	INDUCTOR 1uH	
3-965-312-01	FRAME, MG						
		< CAPACITOR >					
C901	1-135-201-11	TANTALUM CHIP 10uF 20% 4V		* A-7066-444-A	MI-24	BOARD, COMPLETE	
C902	1-162-974-11	CERAMIC CHIP 0.01uF 50V				*****	
C903	1-162-974-11	CERAMIC CHIP 0.01uF 50V				(Ref. No. 6,000 Series)	
C904	1-162-974-11	CERAMIC CHIP 0.01uF 50V				< CAPACITOR >	
C905	1-135-201-11	TANTALUM CHIP 10uF 20% 4V		C701	1-104-753-11	TANTAL. CHIP 47uF 20% 6.3V	
C906	1-162-974-11	CERAMIC CHIP 0.01uF 50V		C702	1-135-145-11	TANTAL. CHIP 0.47uF 20% 35V	
C907	1-162-974-11	CERAMIC CHIP 0.01uF 50V		C703	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
C908	1-162-974-11	CERAMIC CHIP 0.01uF 50V		C704	1-163-078-11	CERAMIC CHIP 0.033uF 10% 25V	
C909	1-135-201-11	TANTALUM CHIP 10uF 20% 4V		C705	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
C910	1-162-974-11	CERAMIC CHIP 0.01uF 50V		C706	1-162-923-11	CERAMIC CHIP 47PF 5% 50V	
C911	1-162-974-11	CERAMIC CHIP 0.01uF 50V		C707	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
C912	1-135-201-11	TANTALUM CHIP 10uF 20% 4V		C708	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
C913	1-162-974-11	CERAMIC CHIP 0.01uF 50V		C709	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
C914	1-162-974-11	CERAMIC CHIP 0.01uF 50V		C710	1-163-078-11	CERAMIC CHIP 0.033uF 10% 25V	
C915	1-162-974-11	CERAMIC CHIP 0.01uF 50V		C711	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
C916	1-135-201-11	TANTALUM CHIP 10uF 20% 4V		C712	1-162-923-11	CERAMIC CHIP 47PF 5% 50V	
C917	1-162-974-11	CERAMIC CHIP 0.01uF 50V		C713	1-135-145-11	TANTAL. CHIP 0.47uF 20% 35V	
C918	1-162-974-11	CERAMIC CHIP 0.01uF 50V		C714	1-135-259-11	TANTAL. CHIP 10uF 20% 6.3V	
C919	1-162-974-11	CERAMIC CHIP 0.01uF 50V		C721	1-104-752-11	TANTAL. CHIP 33uF 20% 6.3V	
C920	1-135-201-11	TANTALUM CHIP 10uF 20% 4V				< CONNECTOR >	
C921	1-162-974-11	CERAMIC CHIP 0.01uF 50V		CN701	1-573-351-11	CONNECTOR, FFC/FPC (ZIF) 11P	
C922	1-162-974-11	CERAMIC CHIP 0.01uF 50V		CN702	1-580-057-11	PIN, CONNECTOR 4P	
C923	1-135-201-11	TANTALUM CHIP 10uF 20% 4V		CN703	1-580-057-11	PIN, CONNECTOR 4P	
C924	1-162-974-11	CERAMIC CHIP 0.01uF 50V					
C925	1-162-974-11	CERAMIC CHIP 0.01uF 50V					

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C848	1-104-851-11	TANTAL. CHIP	10uF 20% 10V	C916	1-162-974-11	CERAMIC CHIP	0.01uF 50V
C849	1-162-974-11	CERAMIC CHIP	0.01uF 50V	C917	1-162-974-11	CERAMIC CHIP	0.01uF 50V
C850	1-162-974-11	CERAMIC CHIP	0.01uF 50V	C918	1-164-360-11	CERAMIC CHIP	0.1uF 16V
C853	1-162-974-11	CERAMIC CHIP	0.01uF 50V	C919	1-135-201-11	TANTALUM CHIP	10uF 20% 4V
C854	1-104-851-11	TANTAL. CHIP	10uF 20% 10V	C920	1-164-360-11	CERAMIC CHIP	0.1uF 16V
C855	1-104-851-11	TANTAL. CHIP	10uF 20% 10V	C921	1-162-969-11	CERAMIC CHIP	0.0068uF 10% 25V
C857	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	C922	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C859	1-162-974-11	CERAMIC CHIP	0.01uF 50V	C923	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C861	1-162-974-11	CERAMIC CHIP	0.01uF 50V	C924	1-162-969-11	CERAMIC CHIP	0.0068uF 10% 25V
C862	1-162-974-11	CERAMIC CHIP	0.01uF 50V	C925	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C873	1-162-974-11	CERAMIC CHIP	0.01uF 50V	C926	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C874	1-162-974-11	CERAMIC CHIP	0.01uF 50V	C927	1-162-920-11	CERAMIC CHIP	27PF 5% 50V
C875	1-135-201-11	TANTALUM CHIP	10uF 20% 4V	C928	1-164-174-11	CERAMIC CHIP	0.0082uF 10% 25V
C876	1-135-201-11	TANTALUM CHIP	10uF 20% 4V	C929	1-164-174-11	CERAMIC CHIP	0.0082uF 10% 25V
C880	1-162-915-11	CERAMIC CHIP	10PF 0.5PF 50V	C930	1-164-174-11	CERAMIC CHIP	0.0082uF 10% 25V
C881	1-162-915-11	CERAMIC CHIP	10PF 0.5PF 50V	C931	1-164-360-11	CERAMIC CHIP	0.1uF 16V
C882	1-164-360-11	CERAMIC CHIP	0.1uF 16V	C932	1-165-176-11	CERAMIC CHIP	0.047uF 10% 16V
C883	1-135-201-11	TANTALUM CHIP	10uF 20% 4V	C933	1-107-686-11	TANTAL. CHIP	4.7uF 20% 16V
C884	1-164-360-11	CERAMIC CHIP	0.1uF 16V	C934	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C885	1-135-201-11	TANTALUM CHIP	10uF 20% 4V	C935	1-164-360-11	CERAMIC CHIP	0.1uF 16V
C886	1-164-360-11	CERAMIC CHIP	0.1uF 16V	C936	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C887	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	C937	1-164-360-11	CERAMIC CHIP	0.1uF 16V
C888	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V	C938	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C889	1-164-360-11	CERAMIC CHIP	0.1uF 16V	C939	1-164-360-11	CERAMIC CHIP	0.1uF 16V
C890	1-164-360-11	CERAMIC CHIP	0.1uF 16V	C940	1-164-360-11	CERAMIC CHIP	0.1uF 16V
C891	1-164-360-11	CERAMIC CHIP	0.1uF 16V	C941	1-107-686-11	TANTAL. CHIP	4.7uF 20% 16V
C892	1-164-360-11	CERAMIC CHIP	0.1uF 16V	C942	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V
C893	1-164-360-11	CERAMIC CHIP	0.1uF 16V	C943	1-164-360-11	CERAMIC CHIP	0.1uF 16V
C894	1-164-360-11	CERAMIC CHIP	0.1uF 16V	C944	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C895	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V	C945	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C896	1-107-686-11	TANTAL. CHIP	4.7uF 20% 16V	C946	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C897	1-164-217-11	CERAMIC CHIP	150PF 5% 50V	C953	1-164-360-11	CERAMIC CHIP	0.1uF 16V
C898	1-164-217-11	CERAMIC CHIP	150PF 5% 50V	C955	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C899	1-164-360-11	CERAMIC CHIP	0.1uF 16V	C956	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C900	1-162-974-11	CERAMIC CHIP	0.01uF 50V	C957	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C901	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V	C958	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C902	1-164-227-11	CERAMIC CHIP	0.022uF 10% 25V	C959	1-110-569-11	TANTAL. CHIP	47uF 20% 6.3V
C903	1-135-091-91	TANTAL. CHIP	1uF 20% 16V	C960	1-162-968-11	CERAMIC CHIP	0.0047uF 10% 50V
C904	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	< CONNECTOR >			
C905	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	* CN770	1-770-449-21	CONNECTOR, BOARD T1 BOARD 70P	
C906	1-164-363-11	CERAMIC CHIP	560PF 5% 50V	CN771	1-566-542-31	CONNECTOR, FPC (NON ZIF) 10P	
C907	1-135-201-11	TANTALUM CHIP	10uF 20% 4V	* CN775	1-691-922-11	CONNECTOR, BOARD TO BOARD 14P	
C908	1-162-966-11	CERAMIC CHIP	0.0022uF 10% 50V	CN880	1-691-483-21	CONNECTOR, FFC/FPC 4P	
C909	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	CN881	1-766-642-21	CONNECTOR, FFC/FPC 6P	
C910	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	CN882	1-766-652-11	CONNECTOR, FFC/FPC 16P	
C911	1-104-914-11	TANTAL. CHIP	22uF 20% 16V	CN883	1-766-647-21	CONNECTOR, FFC/FPC 11P	
C912	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V	* CN884	1-770-450-21	CONNECTOR, BOARD TO BOARD 30P	
C913	1-162-966-11	CERAMIC CHIP	0.0022uF 10% 50V	CN885	1-766-654-21	CONNECTOR, FFC/FPC 18P	
C914	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V				
C915	1-164-360-11	CERAMIC CHIP	0.1uF 16V				

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
< DIODE >							
D771	8-719-046-90	DIODE MA2S111		L881	1-412-282-41	INDUCTOR 470uH	
D772	8-719-046-90	DIODE MA2S111		L883	1-414-398-11	INDUCTOR 10uH	
D773	8-719-041-39	DIODE KV1470		L884	1-414-392-21	INDUCTOR 1uH	
D774	8-719-052-27	DIODE 1SS351-TB		L885	1-414-392-21	INDUCTOR 1uH	
D775	8-719-052-27	DIODE 1SS351-TB		L886	1-414-392-21	INDUCTOR 1uH	
D776	8-719-027-95	DIODE HSM88WK		L887	1-414-392-21	INDUCTOR 1uH	
D883	8-719-046-90	DIODE MA2S111		L888	1-414-392-21	INDUCTOR 1uH	
D884	8-719-421-03	DIODE MA732		L889	1-414-392-21	INDUCTOR 1uH	
< FILTER >				L890	1-414-398-11	INDUCTOR 10uH	
FL770	1-411-274-21	LINE, LC DELAY (23NS)		L891	1-414-392-21	INDUCTOR 1uH	
FL771	1-233-343-21	FILTER, LOW PASS		< IC LINK >			
FL772	1-233-344-21	FILTER, LOW PASS		△PS880	1-576-123-21	LINK, IC (CCP2E20 0.8A)	
FL880	1-233-351-21	FILTER, BAND PASS		< TRANSISTOR >			
FL881	1-233-350-21	FILTER, BAND PASS		Q772	8-729-429-14	TRANSISTOR UN9211	
< IC >				Q773	8-729-141-48	TRANSISTOR 2SB624-BV345	
IC770	8-759-278-56	IC AK6440HF-E2		Q774	8-729-141-48	TRANSISTOR 2SB624-BV345	
IC771	8-759-064-36	IC MB88346BPFV		Q775	8-729-429-14	TRANSISTOR UN9211	
IC772	8-752-371-18	IC CXD2302Q		Q776	8-729-425-64	TRANSISTOR 2SD2216-Q	
IC773	8-752-070-12	IC CXA1762Q		Q777	8-729-425-64	TRANSISTOR 2SD2216-Q	
IC774	8-752-374-86	IC CXD2189R		Q778	8-729-425-64	TRANSISTOR 2SD2216-Q	
IC775	8-752-070-11	IC CXA1761R		Q779	8-729-425-64	TRANSISTOR 2SD2216-Q	
IC777	8-752-067-87	IC CXA1760Q		Q784	8-729-425-50	TRANSISTOR 2SB1462-Q	
IC880	8-752-871-04	IC CXP911016-006R (NOTE)		Q880	8-729-017-61	TRANSISTOR 2SB1581	
IC881	8-759-165-47	IC MPC1780VFUEB		Q881	8-729-425-50	TRANSISTOR 2SB1462-Q	
IC882	8-759-066-55	IC TA75W393FU		Q882	8-729-427-72	TRANSISTOR XP4501	
IC883	8-759-082-60	IC TC7S66FU		Q883	8-729-429-14	TRANSISTOR UN9211	
IC885	8-759-327-00	IC CXA8044Q-T4		Q885	8-729-425-64	TRANSISTOR 2SD2216-Q	
IC886	8-759-337-40	IC NJM2904V		Q886	8-729-429-14	TRANSISTOR UN9211	
IC887	8-759-337-40	IC NJM2904V		Q887	8-729-429-14	TRANSISTOR UN9211	
IC888	8-759-335-42	IC CXA1793N-E2		Q888	8-729-141-48	TRANSISTOR 2SB624-BV345	
IC889	8-759-326-99	IC MCD005AM-TLM		Q889	8-729-425-64	TRANSISTOR 2SD2216-Q	
< COIL >				Q890	8-729-425-64	TRANSISTOR 2SD2216-Q	
L770	1-414-398-11	INDUCTOR 10uH		< RESISTOR >			
L772	1-414-398-11	INDUCTOR 10uH		R770	1-216-845-11	METAL CHIP 100K 5% 1/16W	
L773	1-414-398-11	INDUCTOR 10uH		R771	1-216-864-11	METAL CHIP 0 5% 1/16W	
L774	1-414-398-11	INDUCTOR 10uH		R774	1-216-841-11	METAL CHIP 47K 5% 1/16W	
L776	1-414-398-11	INDUCTOR 10uH		R776	1-216-818-11	METAL CHIP 560 5% 1/16W	
L777	1-414-398-11	INDUCTOR 10uH		R777	1-216-812-11	METAL CHIP 180 5% 1/16W	
L779	1-410-738-41	INDUCTOR CHIP 0.56uH		R778	1-216-864-11	METAL CHIP 0 5% 1/16W	
L780	1-414-398-11	INDUCTOR 10uH		R779	1-216-835-11	METAL CHIP 15K 5% 1/16W	
L781	1-412-963-11	INDUCTOR 100uH		R780	1-216-837-11	METAL CHIP 22K 5% 1/16W	
L782	1-412-963-11	INDUCTOR 100uH		R781	1-216-821-11	METAL CHIP 1K 5% 1/16W	
L783	1-414-398-11	INDUCTOR 10uH		R782	1-216-833-11	METAL CHIP 10K 5% 1/16W	
L789	1-414-398-11	INDUCTOR 10uH		R783	1-216-833-11	METAL CHIP 10K 5% 1/16W	
L791	1-414-398-11	INDUCTOR 10uH		R784	1-216-833-11	METAL CHIP 10K 5% 1/16W	
L880	1-414-398-11	INDUCTOR 10uH		R785	1-216-833-11	METAL CHIP 10K 5% 1/16W	
				R786	1-216-817-11	METAL CHIP 470 5% 1/16W	

NOTE: Refer to page 4-78 for replacement.

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
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Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R787	1-202-924-11	METAL CHIP	240	5%	1/16W	R852	1-216-816-11	METAL CHIP	390	5%	1/16W
R788	1-202-924-11	METAL CHIP	240	5%	1/16W	R855	1-216-834-11	METAL CHIP	12K	5%	1/16W
R789	1-216-824-11	METAL CHIP	1.8K	5%	1/16W	R856	1-216-834-11	METAL CHIP	12K	5%	1/16W
R790	1-216-841-11	METAL CHIP	47K	5%	1/16W	R858	1-216-816-11	METAL CHIP	390	5%	1/16W
R791	1-216-815-11	METAL CHIP	330	5%	1/16W	R861	1-216-864-11	METAL CHIP	0	5%	1/16W
R792	1-216-814-11	METAL CHIP	270	5%	1/16W	R862	1-216-864-11	METAL CHIP	0	5%	1/16W
R793	1-216-815-11	METAL CHIP	330	5%	1/16W	R880	1-216-821-11	METAL CHIP	1K	5%	1/16W
R794	1-216-816-11	METAL CHIP	390	5%	1/16W	R881	1-216-821-11	METAL CHIP	1K	5%	1/16W
R795	1-216-815-11	METAL CHIP	330	5%	1/16W	R885	1-216-857-11	METAL CHIP	1M	5%	1/16W
R796	1-216-809-11	METAL CHIP	100	5%	1/16W	R886	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R797	1-216-815-11	METAL CHIP	330	5%	1/16W	R887	1-216-821-11	METAL CHIP	1K	5%	1/16W
R798	1-216-815-11	METAL CHIP	330	5%	1/16W	R888	1-216-851-11	METAL CHIP	330K	5%	1/16W
R799	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	R889	1-216-841-11	METAL CHIP	47K	5%	1/16W
R800	1-216-841-11	METAL CHIP	47K	5%	1/16W	R891	1-218-877-11	METAL CHIP	18K	0.50%	1/16W
R801	1-216-841-11	METAL CHIP	47K	5%	1/16W	R893	1-218-878-11	METAL CHIP	20K	0.50%	1/16W
R802	1-216-841-11	METAL CHIP	47K	5%	1/16W	R894	1-218-871-11	METAL CHIP	10K	0.50%	1/16W
R803	1-216-864-11	METAL CHIP	0	5%	1/16W	R895	1-216-841-11	METAL CHIP	47K	5%	1/16W
R804	1-216-839-11	METAL CHIP	33K	5%	1/16W	R896	1-216-833-11	METAL CHIP	10K	5%	1/16W
R805	1-216-864-11	METAL CHIP	0	5%	1/16W	R897	1-218-879-11	METAL CHIP	22K	0.50%	1/16W
R806	1-216-821-11	METAL CHIP	1K	5%	1/16W	R898	1-218-883-11	METAL CHIP	33K	0.50%	1/16W
R808	1-216-821-11	METAL CHIP	1K	5%	1/16W	R900	1-216-833-11	METAL CHIP	10K	5%	1/16W
R809	1-216-864-11	METAL CHIP	0	5%	1/16W	R901	1-216-846-11	METAL CHIP	120K	5%	1/16W
R810	1-216-834-11	METAL CHIP	12K	5%	1/16W	R902	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R811	1-216-834-11	METAL CHIP	12K	5%	1/16W	R903	1-216-833-11	METAL CHIP	10K	5%	1/16W
R812	1-216-834-11	METAL CHIP	12K	5%	1/16W	R904	1-216-846-11	METAL CHIP	120K	5%	1/16W
R813	1-216-834-11	METAL CHIP	12K	5%	1/16W	R905	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R814	1-216-853-11	METAL CHIP	470K	5%	1/16W	R906	1-216-841-11	METAL CHIP	47K	5%	1/16W
R815	1-216-853-11	METAL CHIP	470K	5%	1/16W	R907	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R816	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	R908	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R817	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	R909	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R818	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	R910	1-216-843-11	METAL CHIP	68K	5%	1/16W
R819	1-216-831-11	METAL CHIP	6.8K	5%	1/16W	R911	1-216-834-11	METAL CHIP	12K	5%	1/16W
R820	1-216-803-11	METAL CHIP	33	5%	1/16W	R912	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R821	1-216-833-11	METAL CHIP	10K	5%	1/16W	R913	1-216-815-11	METAL CHIP	330	5%	1/16W
R822	1-216-834-11	METAL CHIP	12K	5%	1/16W	R914	1-216-833-11	METAL CHIP	10K	5%	1/16W
R823	1-216-834-11	METAL CHIP	12K	5%	1/16W	R916	1-216-839-11	METAL CHIP	33K	5%	1/16W
R824	1-216-821-11	METAL CHIP	1K	5%	1/16W	R917	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R825	1-216-835-11	METAL CHIP	15K	5%	1/16W	R918	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R826	1-216-833-11	METAL CHIP	10K	5%	1/16W	R919	1-216-836-11	METAL CHIP	18K	5%	1/16W
R827	1-216-821-11	METAL CHIP	1K	5%	1/16W	R920	1-216-833-11	METAL CHIP	10K	5%	1/16W
R828	1-216-835-11	METAL CHIP	15K	5%	1/16W	R921	1-216-833-11	METAL CHIP	10K	5%	1/16W
R829	1-216-835-11	METAL CHIP	15K	5%	1/16W	R922	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R830	1-216-830-11	METAL CHIP	5.6K	5%	1/16W	R924	1-216-837-11	METAL CHIP	22K	5%	1/16W
R831	1-216-830-11	METAL CHIP	5.6K	5%	1/16W	R925	1-216-837-11	METAL CHIP	22K	5%	1/16W
R832	1-216-807-11	METAL CHIP	68	5%	1/16W	R926	1-216-810-11	METAL CHIP	120	5%	1/16W
R843	1-216-819-11	METAL CHIP	680	5%	1/16W	R930	1-216-833-11	METAL CHIP	10K	5%	1/16W
R844	1-216-819-11	METAL CHIP	680	5%	1/16W	R931	1-216-833-11	METAL CHIP	10K	5%	1/16W
R849	1-216-816-11	METAL CHIP	390	5%	1/16W	R932	1-216-821-11	METAL CHIP	1K	5%	1/16W
R850	1-216-815-11	METAL CHIP	330	5%	1/16W	R933	1-216-821-11	METAL CHIP	1K	5%	1/16W
R851	1-216-815-11	METAL CHIP	330	5%	1/16W	R935	1-216-821-11	METAL CHIP	1K	5%	1/16W

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R936	1-216-833-11	METAL CHIP	10K	5%	1/16W	*	A-7072-225-A	SE-35 BOARD, COMPLETE			
R939	1-218-897-11	METAL CHIP	120K	0.50%	1/16W			*****			
R941	1-216-833-11	METAL CHIP	10K	5%	1/16W			(Ref. No. 1,000 Series)			
R942	1-218-875-11	METAL CHIP	15K	0.50%	1/16W			< CAPACITOR >			
R943	1-218-895-11	METAL CHIP	100K	0.50%	1/16W			C401	1-104-908-11	TANTAL. CHIP	47uF 20% 4V
R944	1-216-833-11	METAL CHIP	10K	5%	1/16W			C403	1-104-852-11	TANTAL. CHIP	22uF 20% 6.3V
R945	1-216-833-11	METAL CHIP	10K	5%	1/16W			C405	1-104-908-11	TANTAL. CHIP	47uF 20% 4V
R947	1-216-833-11	METAL CHIP	10K	5%	1/16W			C406	1-163-037-11	CERAMIC CHIP	0.022uF 10% 25V
R948	1-216-833-11	METAL CHIP	10K	5%	1/16W			C407	1-104-852-11	TANTAL. CHIP	22uF 20% 6.3V
R951	1-216-833-11	METAL CHIP	10K	5%	1/16W			C408	1-135-259-11	TANTAL. CHIP	10uF 20% 6.3V
R953	1-218-891-11	METAL CHIP	68K	0.50%	1/16W			C409	1-164-360-11	CERAMIC CHIP	0.1uF 16V
R954	1-216-864-11	METAL CHIP	0	5%	1/16W			C410	1-163-809-11	CERAMIC CHIP	0.047uF 10% 25V
R955	1-216-864-11	METAL CHIP	0	5%	1/16W			C411	1-162-967-11	CERAMIC CHIP	0.0033uF 10% 50V
R957	1-216-829-11	METAL CHIP	4.7K	5%	1/16W			C412	1-162-974-11	CERAMIC CHIP	0.01uF 50V
R958	1-218-877-11	METAL CHIP	18K	0.50%	1/16W			C413	1-163-037-11	CERAMIC CHIP	0.022uF 10% 25V
R959	1-218-873-11	METAL CHIP	12K	0.50%	1/16W			C415	1-162-967-11	CERAMIC CHIP	0.0033uF 10% 50V
R960	1-218-879-11	METAL CHIP	22K	0.50%	1/16W			C416	1-163-809-11	CERAMIC CHIP	0.047uF 10% 25V
R961	1-216-841-11	METAL CHIP	47K	5%	1/16W			C418	1-128-257-21	ELECT CHIP	33uF 20% 10V
R962	1-218-879-11	METAL CHIP	22K	0.50%	1/16W			C419	1-128-257-21	ELECT CHIP	33uF 20% 10V
R963	1-216-821-11	METAL CHIP	1K	5%	1/16W			C420	1-162-953-11	CERAMIC CHIP	100PF 5% 50V
R964	1-217-671-11	METAL CHIP	1	5%	1/10W			C421	1-162-953-11	CERAMIC CHIP	100PF 5% 50V
R965	1-217-671-11	METAL CHIP	1	5%	1/10W			C422	1-163-037-11	CERAMIC CHIP	0.022uF 10% 25V
R966	1-217-671-11	METAL CHIP	1	5%	1/10W			C423	1-163-037-11	CERAMIC CHIP	0.022uF 10% 25V
R967	1-217-671-11	METAL CHIP	1	5%	1/10W			C424	1-164-360-11	CERAMIC CHIP	0.1uF 16V
R969	1-216-842-11	METAL CHIP	56K	5%	1/16W			< CONNECTOR >			
R970	1-216-857-11	METAL CHIP	1M	5%	1/16W			CN401	1-766-336-21	CONNECTOR, FFC/FPC 6P	
R971	1-218-839-11	METAL CHIP	470	0.50%	1/16W			< IC >			
R973	1-217-671-11	METAL CHIP	1	5%	1/10W			IC401	8-759-075-66	IC TA75S01F	
R974	1-218-877-11	METAL CHIP	18K	0.50%	1/16W			IC402	8-759-080-34	IC TA75W01FU	
R975	1-217-671-11	METAL CHIP	1	5%	1/10W			IC403	8-759-234-77	IC TC4S66F	
R976	1-217-671-11	METAL CHIP	1	5%	1/10W			IC404	8-759-234-77	IC TC4S66F	
R977	1-217-671-11	METAL CHIP	1	5%	1/10W			IC405	8-759-058-45	IC NJM3403AV	
R980	1-216-819-11	METAL CHIP	680	5%	1/16W			< RESISTOR >			
R981	1-216-835-11	METAL CHIP	15K	5%	1/16W			R401	1-216-803-11	METAL CHIP	33 5% 1/16W
< COMPOSITION CIRCUIT BLOCK >								R402	1-216-837-11	METAL CHIP	22K 5% 1/16W
RB880	1-239-389-11	NETWORK, RES 47K						R403	1-216-837-11	METAL CHIP	22K 5% 1/16W
RB881	1-236-904-11	NETWORK, RES 1.0K						R404	1-216-803-11	METAL CHIP	33 5% 1/16W
RB882	1-236-412-11	NETWORK, RES 1.0K						R405	1-216-837-11	METAL CHIP	22K 5% 1/16W
RB883	1-236-432-11	NETWORK, RES 47K						R406	1-216-837-11	METAL CHIP	22K 5% 1/16W
RB884	1-239-389-11	NETWORK, RES 47K						R407	1-216-837-11	METAL CHIP	22K 5% 1/16W
RB885	1-236-432-11	NETWORK, RES 47K						R408	1-216-837-11	METAL CHIP	22K 5% 1/16W
RB886	1-236-420-11	NETWORK, RES 4.7K						R412	1-216-837-11	METAL CHIP	22K 5% 1/16W
< VIBRATOR >								R413	1-216-864-11	METAL CHIP	0 5% 1/16W
X880	1-760-655-21	VIBRATOR, CRYSTAL (20MHz)						R414	1-216-833-11	METAL CHIP	10K 5% 1/16W
								R415	1-216-833-11	METAL CHIP	10K 5% 1/16W
								R416	1-208-846-11	METAL GLAZE	470K 0.50% 1/10W
								R417	1-208-846-11	METAL GLAZE	470K 0.50% 1/10W

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R418	1-208-846-11	METAL GLAZE	470K	0.50%	1/10W	C901	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
R419	1-208-846-11	METAL GLAZE	470K	0.50%	1/10W	C902	1-135-091-91	TANTAL. CHIP	1uF	20%	16V
R420	1-216-833-11	METAL CHIP	10K	5%	1/16W	C903	1-162-974-11	CERAMIC CHIP	0.01uF		50V
R421	1-216-850-11	METAL CHIP	270K	5%	1/16W	C904	1-162-974-11	CERAMIC CHIP	0.01uF		50V
R422	1-216-850-11	METAL CHIP	270K	5%	1/16W	C905	1-162-974-11	CERAMIC CHIP	0.01uF		50V
R423	1-216-833-11	METAL CHIP	10K	5%	1/16W	C906	1-135-149-21	TANTALUM CHIP	2.2uF	20%	10V
R424	1-216-835-11	METAL CHIP	15K	5%	1/16W	C907	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
R425	1-216-835-11	METAL CHIP	15K	5%	1/16W	C908	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
< SENSOR >						C909	1-162-974-11	CERAMIC CHIP	0.01uF		50V
SE401	1-810-725-71	SENSOR, ANGULAR VELOCITY (YAW)				C910	1-162-974-11	CERAMIC CHIP	0.01uF		50V
SE402	1-810-725-81	SENSOR, ANGULAR VELOCITY (PITCH)				C911	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
< THERMISTOR >						C912	1-162-974-11	CERAMIC CHIP	0.01uF		50V
TH401	1-809-361-21	THERMISTOR (2125)				C913	1-162-974-11	CERAMIC CHIP	0.01uF		50V
< CAPACITOR >						C914	1-162-974-11	CERAMIC CHIP	0.01uF		50V
* A-7072-227-A VF-74 BOARD, COMPLETE						C915	1-162-974-11	CERAMIC CHIP	0.01uF		50V
*****						C916	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
(Ref. No. 8,000 Series)						C917	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C751	1-104-917-11	TANTAL. CHIP	15uF	20%	20V	C918	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C752	1-162-974-11	CERAMIC CHIP	0.01uF		50V	C919	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C753	1-165-178-11	CERAMIC CHIP	6.8uF		16V	C920	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C754	1-163-020-00	CERAMIC CHIP	0.0082uF	10%	50V	C921	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C755	1-163-020-00	CERAMIC CHIP	0.0082uF	10%	50V	C922	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C756	1-163-020-00	CERAMIC CHIP	0.0082uF	10%	50V	C923	1-164-337-11	CERAMIC CHIP	2.2uF		16V
C851	1-165-128-11	CERAMIC CHIP	0.22uF		16V	C924	1-164-337-11	CERAMIC CHIP	2.2uF		16V
C852	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V	C925	1-164-337-11	CERAMIC CHIP	2.2uF		16V
C853	1-104-916-11	TANTAL. CHIP	6.8uF	20%	20V	C926	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C854	1-164-676-11	CERAMIC CHIP	2200PF	5%	16V	C927	1-135-179-21	TANTAL. CHIP	2.2uF	20%	16V
C855	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V	C928	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C856	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V	C929	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C857	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V	C930	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C858	1-162-974-11	CERAMIC CHIP	0.01uF		50V	C931	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C859	1-107-682-11	CERAMIC CHIP	1uF	10%	16V	C932	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C860	1-164-232-11	CERAMIC CHIP	0.01uF		50V	C933	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C861	1-164-217-11	CERAMIC CHIP	150PF	5%	50V	C934	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C863	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	C935	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C864	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V	C936	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C865	1-162-974-11	CERAMIC CHIP	0.01uF		50V	C940	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C866	1-162-974-11	CERAMIC CHIP	0.01uF		50V	C941	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C868	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	C942	1-135-178-11	TANTAL. CHIP	1.5uF	20%	20V
C869	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V	C943	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C870	1-162-974-11	CERAMIC CHIP	0.01uF		50V	C954	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C875	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V	< CONNECTOR >					
C876	1-162-974-11	CERAMIC CHIP	0.01uF		50V	CN851	1-766-354-21	CONNECTOR, FFC/FPC 24P			
C888	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	* CN854	1-750-343-11	CONNECTOR, FFC/EPC (ZIF) 22P			
< DIODE >						CN902	1-573-371-21	CONNECTOR, BOARD TO BOARD 14P			
D751	8-719-049-57	DIODE	CL-170B-X-T			CN903	1-750-340-21	CONNECTOR, FFC/EPC (ZIF) 16P			

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
D752	8-719-802-36	DIODE 1SS250		R862	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
D753	8-719-989-22	DIODE CL-150R-CD		R863	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
D852	8-719-404-40	DIODE MA121		R864	1-216-839-11	METAL CHIP 33K 5% 1/16W	
D902	8-713-102-80	DIODE 1T369-01-T8A		R865	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
< IC >				R867	1-216-843-11	METAL CHIP 68K 5% 1/16W	
IC851	8-759-097-75	IC MB3789PFV-G-BND		R868	1-216-845-11	METAL CHIP 100K 5% 1/16W	
IC852	8-759-186-26	IC TC74VHC02F		R869	1-216-821-11	METAL CHIP 1K 5% 1/16W	
IC853	8-759-337-40	IC NJM2904V(TE2)		R870	1-216-850-11	METAL CHIP 270K 5% 1/16W	
IC854	8-759-073-95	IC SED1510FOC		R871	1-216-854-11	METAL CHIP 560K 5% 1/16W	
IC856	8-759-337-26	IC MM1115XFBE		R872	1-216-833-11	METAL CHIP 10K 5% 1/16W	
IC901	8-752-070-03	IC CXA1785AR-T4		R873	1-216-840-11	METAL CHIP 39K 5% 1/16W	
IC902	8-759-064-36	IC MB88346BPFV		R874	1-216-841-11	METAL CHIP 47K 5% 1/16W	
IC903	8-752-369-16	IC CXD2411R		R875	1-216-841-11	METAL CHIP 47K 5% 1/16W	
< COIL >				R876	1-216-822-11	METAL CHIP 1.2K 5% 1/16W	
L751	1-412-029-11	INDUCTOR CHIP 10uH		R877	1-216-853-11	METAL CHIP 470K 5% 1/16W	
L851	1-414-406-11	INDUCTOR 220uH		R878	1-216-837-11	METAL CHIP 22K 5% 1/16W	
L852	1-414-398-11	INDUCTOR 10uH		R879	1-216-853-11	METAL CHIP 470K 5% 1/16W	
L853	1-412-032-11	INDUCTOR CHIP 100uH		R881	1-216-850-11	METAL CHIP 270K 5% 1/16W	
L854	1-414-392-21	INDUCTOR 1uH		R882	1-216-864-11	METAL CHIP 0 5% 1/16W	
L855	1-414-398-11	INDUCTOR 10uH		R883	1-216-841-11	METAL CHIP 47K 5% 1/16W	
L901	1-414-398-11	INDUCTOR 10uH		R884	1-218-899-11	METAL CHIP 150K 0.50% 1/16W	
L902	1-414-398-11	INDUCTOR 10uH		R885	1-216-855-11	METAL CHIP 680K 5% 1/16W	
L903	1-414-398-11	INDUCTOR 10uH		R886	1-216-841-11	METAL CHIP 47K 5% 1/16W	
L904	1-412-947-11	INDUCTOR 4.7uH		R887	1-218-901-11	METAL CHIP 180K 0.50% 1/16W	
< TRANSISTOR >				R892	1-216-864-11	METAL CHIP 0 5% 1/16W	
Q751	8-729-024-60	TRANSISTOR MTD6N15T4		R894	1-216-817-11	METAL CHIP 470 5% 1/16W	
Q851	8-729-924-19	TRANSISTOR DTA123JU		R895	1-216-809-11	METAL CHIP 100 5% 1/16W	
Q852	8-729-402-81	TRANSISTOR XN4501		R896	1-217-671-11	METAL CHIP 1 5% 1/10W	
Q901	8-729-905-23	TRANSISTOR 2SA1576-R		R901	1-216-842-11	METAL CHIP 56K 5% 1/16W	
Q902	8-729-402-84	TRANSISTOR XN4601		R902	1-216-837-11	METAL CHIP 22K 5% 1/16W	
< RESISTOR >				R903	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R751	1-216-839-11	METAL CHIP 33K 5% 1/16W		R904	1-216-814-11	METAL CHIP 270 5% 1/16W	
R752	1-216-804-11	METAL CHIP 39 5% 1/16W		R906	1-218-877-11	METAL CHIP 18K 0.50% 1/16W	
R753	1-216-816-11	METAL CHIP 390 5% 1/16W		R907	1-216-854-11	METAL CHIP 560K 5% 1/16W	
R801	1-216-810-11	METAL CHIP 120 5% 1/16W		R908	1-216-842-11	METAL CHIP 56K 5% 1/16W	
R803	1-216-864-11	METAL CHIP 0 5% 1/16W		R911	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R850	1-217-671-11	METAL CHIP 1 5% 1/10W		R913	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R851	1-216-295-00	CONDUCTOR, CHIP (2012) 0		R916	1-216-853-11	METAL CHIP 470K 5% 1/16W	
R853	1-218-899-11	METAL CHIP 150K 0.50% 1/16W		R918	1-216-832-11	METAL CHIP 8.2K 5% 1/16W	
R854	1-218-903-11	METAL CHIP 220K 0.50% 1/16W		R919	1-216-842-11	METAL CHIP 56K 5% 1/16W	
R855	1-216-842-11	METAL CHIP 56K 5% 1/16W		R920	1-216-843-11	METAL CHIP 68K 5% 1/16W	
R856	1-216-847-11	METAL CHIP 150K 5% 1/16W		R921	1-216-848-11	METAL CHIP 180K 5% 1/16W	
R857	1-216-845-11	METAL CHIP 100K 5% 1/16W		R922	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R858	1-216-849-11	METAL CHIP 220K 5% 1/16W		R923	1-216-840-11	METAL CHIP 39K 5% 1/16W	
R859	1-216-837-11	METAL CHIP 22K 5% 1/16W		R924	1-216-840-11	METAL CHIP 39K 5% 1/16W	
R860	1-216-821-11	METAL CHIP 1K 5% 1/16W		R925	1-216-839-11	METAL CHIP 33K 5% 1/16W	
R861	1-216-829-11	METAL CHIP 4.7K 5% 1/16W		R926	1-216-839-11	METAL CHIP 33K 5% 1/16W	
				R927	1-216-840-11	METAL CHIP 39K 5% 1/16W	
				R928	1-216-839-11	METAL CHIP 33K 5% 1/16W	
				R929	1-216-839-11	METAL CHIP 33K 5% 1/16W	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R930	1-216-807-11	METAL CHIP	68 5% 1/16W	874	1-656-250-12	FP-245 FLEXIBLE BOARD	
R931	1-216-807-11	METAL CHIP	68 5% 1/16W	△BL751	1-519-746-81	TUBE, FLUORESCENT (0.7 INCH)(BACK LIGHT)	
R932	1-216-807-11	METAL CHIP	68 5% 1/16W	CN901	1-770-312-11	CONNECTOR 4P	
R933	1-216-831-11	METAL CHIP	6. 8K 5% 1/16W	D901	8-719-050-98	DIODE LN57. SO	
				J901	1-537-875-11	TERMINAL BOARD, BATTERY	
R934	1-216-838-11	METAL CHIP	27K 5% 1/16W	LCD901	8-753-016-04	LCX009AK-1	
R935	1-216-839-11	METAL CHIP	33K 5% 1/16W				
R938	1-216-833-11	METAL CHIP	10K 5% 1/16W	LCD902	1-810-865-11	DISPLAY PANEL, LIQUID CRYSTAL (for EVF)	
R939	1-216-835-11	METAL CHIP	15K 5% 1/16W	LCD903	1-810-864-21	DISPLAY PANEL, LIQUID CRYSTAL	
R940	1-216-833-11	METAL CHIP	10K 5% 1/16W	M901	A-7044-001-A	DRUM ASSY (DEH-01A-R)	
				M902	8-835-524-01	MOTOR, DC SCD-0101A (CAPSTAN)	
R941	1-216-839-11	METAL CHIP	33K 5% 1/16W	M903	A-7026-007-A	MOTOR ASSY, LM (LOADING)	
R942	1-216-821-11	METAL CHIP	1K 5% 1/16W				
R943	1-216-864-11	METAL CHIP	0 5% 1/16W	M904	3-709-018-01	MOTOR UNIT, FOCUS	
R945	1-218-875-11	METAL CHIP	15K 0. 50% 1/16W	M905	3-709-017-01	MOTOR UNIT, ZOOM	
R946	1-218-905-11	METAL CHIP	270K 0. 50% 1/16W	M906	3-709-014-01	MOTOR UNIT, VAP LOCK	
				MIC1	1-542-263-11	MICROPHONE UNIT (L-CH)	
R947	1-216-849-11	METAL CHIP	220K 5% 1/16W	MIC2	1-542-263-11	MICROPHONE UNIT (R-CH)	
R948	1-216-837-11	METAL CHIP	22K 5% 1/16W				
R949	1-216-864-11	METAL CHIP	0 5% 1/16W	Q901	8-729-028-71	TRANSISTOR PN166. SO (TAPE TOP)	
R950	1-216-841-11	METAL CHIP	47K 5% 1/16W	Q902	8-729-028-71	TRANSISTOR PN166. SO (TAPE END)	
R951	1-216-841-11	METAL CHIP	47K 5% 1/16W	RV901	1-762-344-11	SWITCH, ROTARY (ENCODER) (EXPOSURE)	
				S901	1-762-351-11	SWITCH, PUSH (1 KEY) (REC PROOF)	
				SE401	1-810-725-71	SENSOR, ANGULAR VELOCITY (YAW)	
				SE402	1-810-725-81	SENSOR, ANGULAR VELOCITY (PITCH)	
				W200	1-656-398-11	FP-214 FLEXIBLE BOARD	
				W400	1-656-387-11	FP-200 FLEXIBLE BOARD	
				W401	1-656-388-11	FP-201 FLEXIBLE BOARD	

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
*	3-964-035-01	INDIVIDUAL CARTON (VX1000E)	
*	3-964-035-11	INDIVIDUAL CARTON (VX1000)	
	3-964-128-01	EYE CUP (LARGE)	
	8-917-268-90	REMOTE CONTROL RMT-803 SET	
	** AC-V515	AC POWER ADAPTOR	
	*** NP-720	BATTERY PACK	
<u>Note.</u>			
	** MARK PARTS IS AVAILABLE FOR REPAIR SERVICE.		
	*** MARK PARTS IS AVAILABLE AS AN OPTIONAL ACCESSORY.		
<div></div>			

HARDWARE LIST			

#1	7-624-105-04	STOP RING 2.3, TYPE -E	

SECTION 6
ADJUSTMENTS

6-1. CAMERA SECTION ADJUSTMENTS

When performing adjustments, refer to the layout diagrams for adjustment related parts beginning from page 6-28.

Note:
NTSC model: DCR-VX1000
PAL model: DCR-VX1000E

1-1. PREPARATIONS BEFORE ADJUSTMENT
(CAMERA SECTION)

1-1-1. List of Service Tools

- Oscilloscope
- Adjusting driver
- Regulated power supply
- Color monitor
- Vectorscope
- Digital voltmeter

Ref. No.	Name	Parts Code	Usage
J-1	Filter for color temperature correction (C14)	J-6080-058-A	Auto white balance adjustment/check White balance adjustment/check
J-2	ND filter 1.0	J-6080-808-A	White balance check
	ND filter 0.3	J-6080-818-A	White balance check
J-3	Pattern box PTB-450	J-6082-200-A	
J-4	Color chart for pattern box	J-6020-250-A	
J-5	Adjusting remote commander (RM-95-remodeled partly) ^{Note 1}	J-6082-053-B	
J-6	Siemens star	J-6080-875-A	For checking the flange back
J-7	Multi CPC jig	J-6082-311-A	For adjusting the video section For adjusting the viewfinder
J-8	Clear chart for pattern box	J-6080-621-A	
J-9	Extension board (70P, 0.5 mm)	J-6082-321-A	For extension between the CB-49 board (CN002) and the JC-12 board (CN401) For extension between the RS-63 board (CN770) and the JC-12 board (CN403) For extension between the AU-179 board (CN001) and the JC-12 board (CN641)
J-10	Extension board (30P, 0.5 mm)	J-6082-320-A	For extension between the DD-75 board (CN003) and the RS-63 board (CN884)
J-11	Extension board (48P, 0.8 mm)	J-6082-177-A	For extension between the MG-16 board (CN901) and the CB-49 board (CN201)
J-12	Extension board (42P, 0.8 mm)	J-6082-326-A	For extension between the CD-127 board (CN201) and the CB-49 board (CN003)
J-13	Extension cable (23P, 0.5 mm)	J-6082-322-A	For extension between the CC-92 board (CN100) and the JC-12 board (CN501)
J-14	Extension cable (30P, 0.5 mm)	J-6082-323-A	For extension between the LD-75 board (CN304) and the CB-49 board (CN001)
J-15	Extension cable (40P, 0.5 mm)	J-6082-324-A	For extension between the JC-12 board (CN502) and the DD-75 board (CN001) For extension between the CB-49 board (CN002) and the DD-75 board (CN002)
J-16	External power supply adaptor	J-6082-325-A	For connecting the DC power supply

Ref. No.	Name	Parts Code	Usage
J-17	Extension board (24P, 0.5 mm)	J-6082-270-A	For extension between the VF-74 board (CN851) and the CB-49 board (CN290)
J-18	CP jig-2	J-6082-140-A	For adjusting the video section For adjusting the viewfinder

Note 1: If the micro processor IC in the adjusting remote commander is not the new micro processor (UPD7503G-C56-12), the pages cannot be switched. In this case, replace with the new micro processor (8-759-148-35).

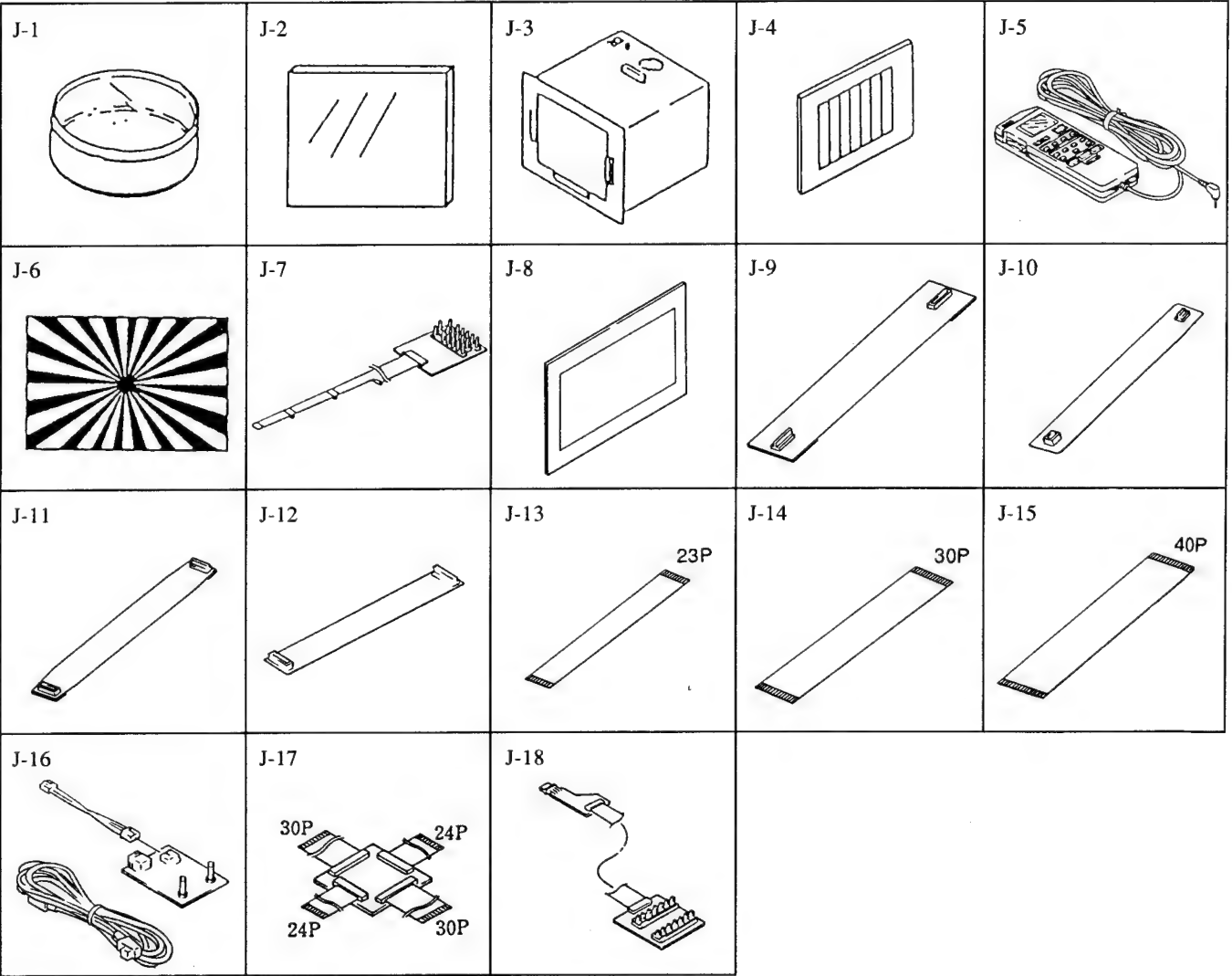


Fig. 6-1-1.

1-1-2. Preparations

Note 1: For details of how to remove the cabinet and boards, refer to "2. Removal".

Note 2: When performing only the adjustments, the lens block and boards need not be disassembled.

- 1) Connect the equipment for adjustments according to Fig. 6-1-3.
- 2) By setting the "Forced Camera Power ON" mode, the camera power can be turned on with the cabinet (L) (standby switch, start/stop switch, zoom switch) removed. However, zoom operations cannot be performed in this case.

If removing the cabinet (L), remove the following connector.

1. JC-12 board CN500 (10P, 0.8 mm)

After completing adjustments, be sure to exit the "Forced Camera Power ON" mode.

Note 1: Setting the "Forced Camera Power ON" Mode

- 1) Set data: 01 to page: 1, address: 00.
- 2) Set data: 21 to page: D, address: 03, and press the PAUSE button of the remote commander.

The above procedure will enable the camera power to be turned on with cabinets (L) and (R) removed. After completing adjustments, be sure to exit the "Forced Camera Power ON" mode.

Note 2: Exiting the "Forced Camera Power ON" Mode

- 1) Set data: 01 to page: 1, address: 00.
- 2) Set data: 00 to page: D, address: 03, and press the PAUSE button of the remote commander.
- 3) Set data: 00 to page: 1, address: 00.

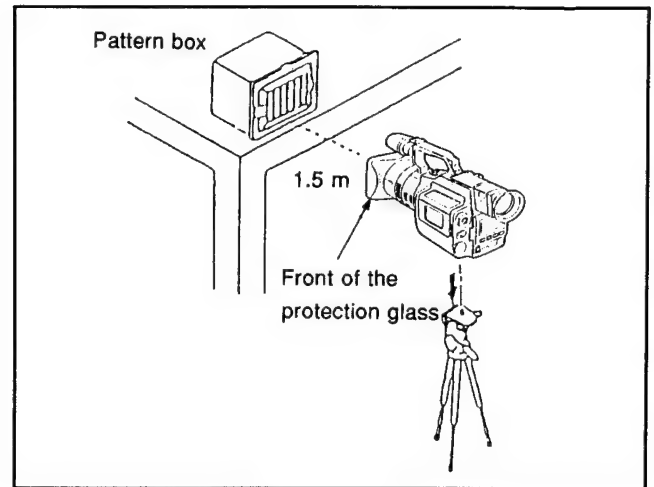


Fig. 6-1-3.

1-1-3. Precautions

1. Setting the Switches

Unless otherwise specified, set the switches as follows and perform adjustments without loading the cassette.

1. Camera/Video Power Supply Switch (PA4500 block) Camera
2. Digital Zoom (Menu Screen) Off
3. STEADY SHOT Switch (LI-49 Board, S604) Off
4. Focus Switch (FI4500 block) Manual

5. ND Filter (Lens block) Off
5. Auto Lock Switch (AK-11 board S400) Auto Lock
6. 16:9 WIDE (Menu Screen) Off
7. Auto Shutter (Menu Screen) Off
8. Custom Preset (Menu Screen) Off
9. Zebra (Menu Screen) Off

2. Order of Adjustments

Basically carry out adjustments in the order given.

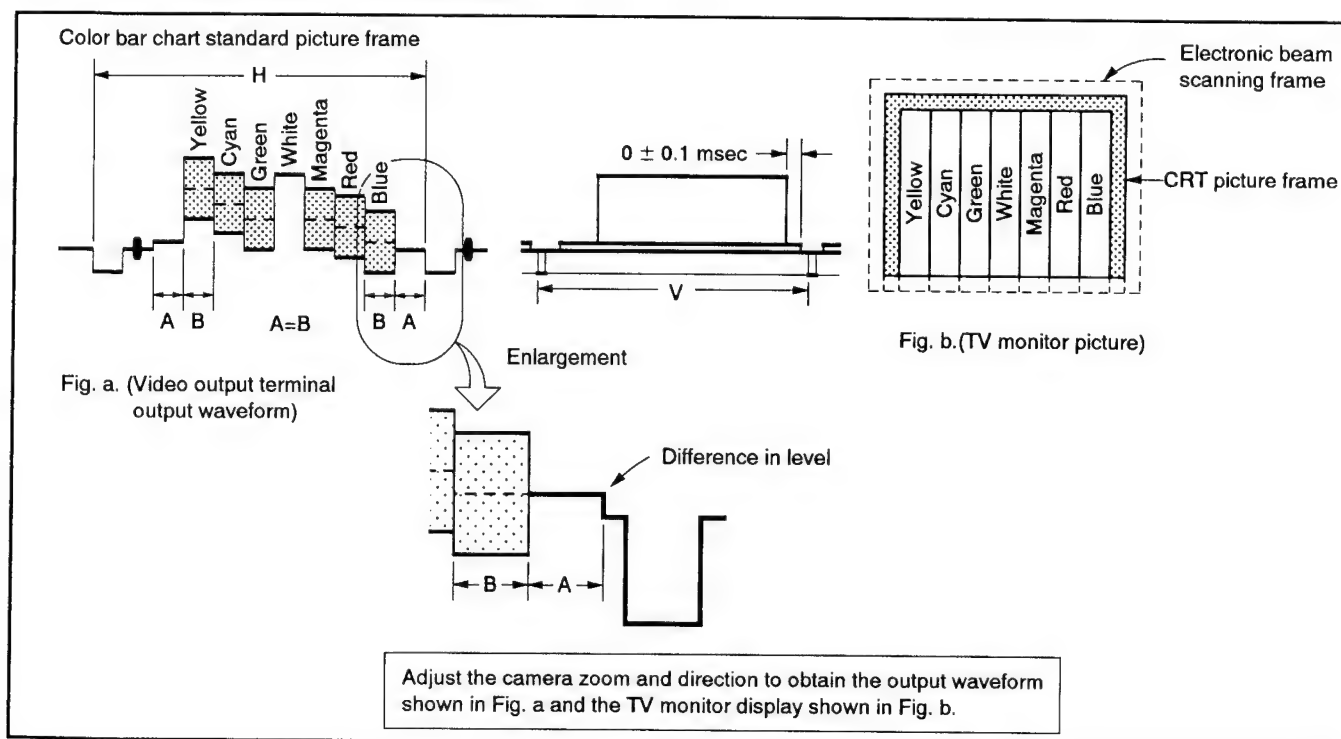


Fig. 6-1-4.

3. Subjects

- 1) Color bar chart (Standard image frame)
When performing adjustments using the color bar chart, adjust the image frame as shown in Fig. 6-1-4. (Standard image frame)
- 2) Clear chart (Standard image frame)
Remove the color bar chart from the pattern box and insert a clear chart in its place. (Do not perform zoom operations during this time.)
- 3) Flange back adjustment chart
Make the chart shown in Fig. 6-1-5 using A0 size (1189mm x 841 mm) black and white vellum paper.

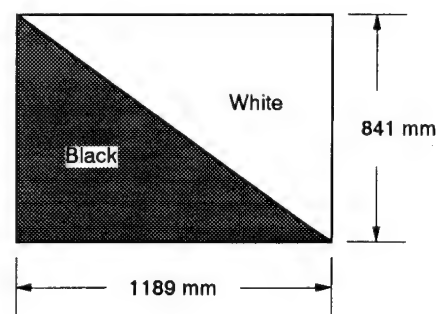


Fig. 6-1-5.

Note: Use matte vellum paper bigger than A0, and make sure the edges of the black and white paper joined together are not rough.

1-1-4. Page F Address

Note 1: The ← mark shown in the adjustment data memory column indicates that the address data is fixed and is the same as the initial value.

Note 2: The initial adjustment data value is the value after “Page F, Page E Data Initialization” and “Page F Data Modification” have been executed. It is different from the value after all adjustments have been executed.

Address	Adjustment Data	
	Initial Value	Memory Column
00	A2	←
01	04 (NTSC), 05 (PAL)	←
02	00	←
03	95	
04	93	
05	97	
06	82	
07	66	
08	83	
09	B7	
0A	B8	
0B	78	
0C	79	
0D	C5	
0E	21	←
0F	1C	←
10	39	←
11	10	←
12	35	←
13	29	←
14	B8	←
15	80	←
16	FF	←
17	D5	
18	EC	
19	20	
1A	20	
1B	50	←
1C	7F	←
1D	1A	←
1E	19	←
1F	22 (NTSC), 00 (PAL)	←
20	05 (NTSC), 00 (PAL)	←
21	2F	←
22	0E	←
23	27	←
24	10	←
25	B9	←

Table 6-1-1 (1).

Address	Adjustment Data	
	Initial Value	Memory Column
26	30	←
27	20	←
28	2C	←
29	00	←
2A	50	←
2B	00	←
2C	00	←
2D	20	←
2E	20	←
2F	02	←
30	A0	
31	6C	
32	F0	←
33	00	←
34	7D	
35	85	
36	10	←
37	10	←
38	00	←
39	00	←
3A	35	←
3B	04	←
3C	30	←
3D	90	←
3E	62	←
3F	47	←
40	7A	←
41	1A	←
42	86	←
43	18	←
44	C9	←
45	A2	←
46	B9	←
47	9F	←
48	8E	←
49	6E	←
4A	81	←
4B	6F	←
4C	78	←
4D	20	←
4E	88	←
4F	67	←
50	5C	←
51	5C	←

Table 6-1-1 (2).

Address	Adjustment Data	
	Initial Value	Memory Column
52	4D	←
53	20	←
54	50	←
55	5B	←
56	3D	←
57	10	←
58	3F	←
59	0A	←
5A	04	←
5B	E0	←
5C	04	←
5D	02	←
5E	20	←
5F	40	←
60	00	←
61	FF	←
62	00	←
63	FF	←
64	00	←
65	FF	←
66	20 (NTSC), 21 (PAL)	←
67	B4	←
68	0C (NTSC), 10 (PAL)	←
69	73 (NTSC), 87 (PAL)	←
6A	00	←
6B	02	←
6C	FE	
6D	00	
6E	00	←
6F	82 (NTSC), 83 (PAL)	←
70	00	←
71	00 (NTSC), 02 (PAL)	←
72	0A	←
73	20	←
74	04	←
75	87	
76	C7	←
77	2C	←
78	A0	←
79	30 (NTSC), 28 (PAL)	←
7A	20 (NTSC), 1B (PAL)	←
7B	39	←
7C	50	←
7D	5C	←

Table 6-1-1 (3).

Address	Adjustment Data	
	Initial Value	Memory Column
7E	8C	←
7F	80	←
80	03	←
81	01	←
82	60	←
83	03	←
84	00	←
85	20 (NTSC), 21 (PAL)	←
86	24	←
87	0C (NTSC), 10 (PAL)	←
88	17 (NTSC), 1B (PAL)	←
89	93	←
8A	DC	←
8B	EA	←
8C	AF	←
8D	EE	←
8E	A8	←
8F	1A	←
90	90	←
91	C0	←
92	04	←
93	08	←
94	90	←
95	C0	←
96	B0	←
97	A0	←
98	80	←
99	A0	←
9A	98	←
9B	90	←
9C	70	←
9D	60	←
9E	08	←
9F	5B	←
A0	2F	←
A1	04	←
A2	32	←
A3	79	←
A4	AF	←
A5	2C	←
A6	40	←
A7	0E	
A8	5F	
A9	14	

Table 6-1-1 (4).

Address	Adjustment Data	
	Initial Value	Memory Column
AA	99	
AB	10	
AC	F2	
AD	13	
AE	60	
AF	10	
B0	00	←
B1	00	←
B2	00	←
B3	47	←
B4	FB	←
B5	00	←
B6	A6	←
B7	00	←
B8	6F	←
B9	66	←
BA	58	←
BB	03	←
BC	24	←
BD	55	←
BE	40	←
BF	64	←
C0	FF	←
C1	26	←
C2	60	←
C3	10	
C4	82	←
C5	00	←
C6	0E	←
C7	00	←
C8	0A	←
C9	04	←
CA	02	←
CB	FF	←
CC	2F	←
CD	FF	←
CE	69	←
CF	CF	←
D0	62	←
D1	01	←
D2	43	←
D3	00	←
D4	18	←
D5	20	←

Table 6-1-1 (5).

Address	Adjustment Data	
	Initial Value	Memory Column
D6	A0	←
D7	90	←
D8	10	←
D9	62	←
DA	05	←
DB	D4	←
DC	EE	←
DD	DC	←
DE	3C	←
DF	10	←
E0	80	
E1	80	
E2	00	←
E3	FF	←
E4	7F	←
E5	10	←
E6	00	←
E7	FF	←
E8	7F	←
E9	10	←
EA	00	←
EB	04	←
EC	00	←
ED	08	←
EE	00	←
EF	08	←
F0	80	←
F1	40	←
F2	40	←
F3	80	←
F4	25	←
F5	79	←
F6	80	←
F7	25	←
F8	79	←
F9	06	←
FA	00	
FB	00	←
FC	00	←
FD	F0	←
FE	FF	←
FF	FF	←

Table 6-1-1 (6).

1-1-5. Page E Address

Note 1: The ← mark shown in the adjustment data memory column indicates that the address data is fixed and is the same as the initial value.

Note 2: The initial adjustment data value is the value after “Page F, Page E Data Initialization” has been executed. It is different from the value after all adjustments have been executed.

Address	Adjustment Data	
	Initial Value	Memory Column
00		
01	0B	←
02	0B	←
03	03	←
04	03	←
05	D5	
06	EC	
07	20	
08	20	
09	28	←
0A	25	←
0B	00	←
0C	30	←
0D	0F	←
0E	00	←
0F	18	←
10	02	←
11	09 (NTSC), 2D (PAL)	←
12	00	←
13	00	←
14	00	←
15	00	←
16	00	←
17	00	←
18	00	
19	00	
1A	00	
1B	00	
1C	00	
1D	00	
1E	00	
1F	00	
20	00	
21	00	
22	00	
23	00	
24	00	
25	00	

Table 6-1-2 (1).

Address	Adjustment Data	
	Initial Value	Memory Column
26	00	
27	00	
28	00	
29	00	
2A	00	
2B	00	
2C	00	
2D	00	
2E	00	
2F	00	

Table 6-1-2 (2).

1-2. CAMERA SYSTEM ADJUSTMENTS

1. Power Supply Voltage Check (DD-75 Board)

Mode	Camera recording
Subject	Arbitrary
Measuring instrument	Digital voltmeter
CAM 3.3V check	
Measurement point	Pins ⑳, ㉑ of CN002 (CL017)
Specified value	3.20 ± 0.12 Vdc
CAM D5.0V check	
Measurement point	Pins ㉕, ㉖ of CN002 (CL019)
Specified value	4.90 ± 0.15 Vdc
CAM 5.0V check	
Measurement point	Pins ㉗ to ㉙ of CN002 (CL020)
Specified value	4.90 ± 0.15 Vdc

Mode	Camera recording
Subject	Arbitrary
Measuring instrument	Digital voltmeter
CCD -8.5V check	
Measurement point	Pin ㉚ of CN002 (CL021)
Specified value	-8.5 ± 0.50 Vdc
CCD 15V check	
Measurement point	Pins ㉛, ㉜ of CN002 (CL022)
Specified value	15 ± 0.50 Vdc
VAP 5.0V check	
Measurement point	Pin ㉟ of CN002 (CL024)
Specified value	5.00 ± 0.15 Vdc
CAM MT5.0V check	
Measurement point	Pin ㉠ of CN002 (CL025)
Specified value	5.00 ± 0.15 Vdc

2. Page F, Page E Data Initialization

Note: It is necessary to perform all adjustments of the camera section from the beginning again if the data of page F has been initialized.

Initializing method:

- 1) Set data: 01 to page: 6, address: 00.
- 2) Check that the data of page: 6, address: 11 is 00.
- 3) Set data: (2D) [2F] to page: 6, address: 01, and press the PAUSE button of the adjusting remote commander.
(): NTSC model
[]: PAL model
- 4) Check that the data of page: 6, address: 11 is 01.
- 5) Set data: 00 to page: 6, address: 01. and press the PAUSE button of the adjusting remote commander.
- 6) Set data: 00 to page: 6, address: 00.
- 7) Set data: 00 to page: 6, address: 11.
- 8) Perform all the adjustments of the camera section.

3. Page F Data Modification

If the data of page F has been initialized, change the data by manual input.

Note 1: When changing the data, to write the data to the non-volatile memory, press the PAUSE button of the adjusting remote commander every time the new data is set.

Note 2: After completing "Page F data modification" set the data of page: 6, address: 00 to 00.

• For PAL model

Address	Data
1F	00
20	00
6F	83

4. 28 MHz Original Oscillation Adjustment (CB-49 board)

Adjust the 28 MHz oscillation of the synchronization clock.

If the oscillation is not 28 MHz, the period will be inaccurate or the image will not be in color.

Subject	Not required
Measurement Point	Pin ⑩ of IC006 (CL017)
Measuring Instrument	Frequency counter
Adjusting Element	CT001
Specified Value	14318181 \pm 43 Hz (NTSC) 14187500 \pm 43 Hz (PAL)

Adjusting method:

- 1) Use CT001 to adjust the oscillation frequency to the specified value.

5. V SUB Adjustment

Set the V SUB voltage of the CCD imager to the voltage value set for each imager.

Subject	Unrequired
Adjustment Page	F
Adjustment Address	03, 04, 05

Adjusting method:

- 1) Read the V SUB voltage code of the Rch, Bch, and Gch CCD imager, and obtain the corresponding V SUB data from the following table.
- 2) Set data: 01 to page: 6, address: 00.
- 3) Set the Rch V SUB data to page: F, address: 03.
- 4) Press the PAUSE button of the adjusting remote commander.
- 5) Set the Gch V SUB data to page: F, address: 04.
- 6) Press the PAUSE button of the adjusting remote commander.
- 7) Set the Bch V SUB data to page: F, address: 05.
- 8) Press the PAUSE button of the adjusting remote commander.
- 9) Set data: 00 to page: 6, address: 00.

V SUB		V SUB	
Voltage Code	Data	Voltage Code	Data
E	71	Q	AD
F	77	R	B3
G	7D	S	B9
H	83	T	BF
J	89	U	C4
K	8F	V	CA
L	95	W	D0
M	9B	X	D6
N	A1	Y	DC
P	A7	Z	E2

6. V RG Adjustment

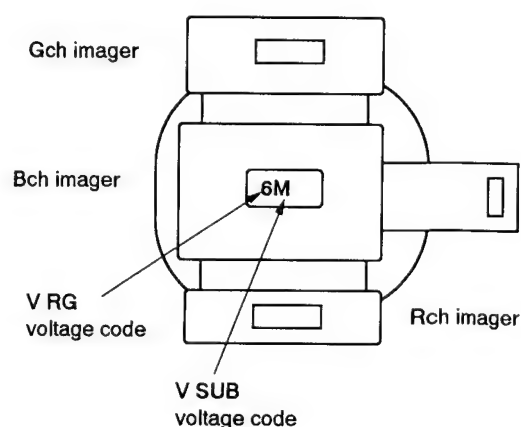
Set the V RG voltage of the CCD imager to the voltage value set for each imager.

Subject	Unrequired
Adjustment Page	F
Adjustment Address	06, 07, 08

Adjusting method:

- 1) Read the V RG voltage code of the Rch, Bch, and Gch CCD imager, and obtain the corresponding V RG data from the following table.
- 2) Set data: 01 to page: 6, address: 00.
- 3) Set the Rch V RG data to page: F, address: 06.
- 4) Press the PAUSE button of the adjusting remote commander.
- 5) Set the Gch V RG data to page: F, address: 07.
- 6) Press the PAUSE button of the adjusting remote commander.
- 7) Set the Bch V RG data to page: F, address: 08.
- 8) Press the PAUSE button of the adjusting remote commander.
- 9) Set data: 00 to page: 6, address: 00.

V RG	
Voltage Code	Data
1	2F
2	47
3	62
4	7C
5	96
6	B2
7	CD



(Example)

When the display is 6M.

As the V SUB voltage code is "M", the V SUB data is "9B".

As the V RG voltage code is "6", the V RG data is "B2".

Fig. 6-1-6.

7. HALL Adjustment

For detecting the position of the lens iris, adjust the hall AMP gain and hall offset.

Subject	Not required
Measurement Point	DDS display of EVF
Measuring Instrument	
Adjustment Page	F
Adjustment Address	0C, 0B
Specified Value	<p>“13” to “15” during the data of address: 01 of page: 6 is “01”.</p> <p>“77” to “79” during the data of address: 01 of page: 6 is “03”.</p>

Adjusting method:

- 1) Set data: 01 to page: 6, address: 00.
- 2) Set data: 01 to page: 1, address: 00.
- 3) Set data: 21 to page: D, address: 03, and press the PAUSE button of the adjusting remote commander.
- 4) Set data: 03 to page: 6, address: 02.
- 5) Set data: 03 to page: 6, address: 01, and press the PAUSE button of the adjusting remote commander.
- 6) Set data: 78 to page: F, address: 0B, and press the PAUSE button of the adjusting remote commander.
- 7) Set data: 40 to page: F, address: 0C, and press the PAUSE button of the adjusting remote commander.
- 8) Read the DDS display data (the bottom two digits of the display data at the bottom right of the EVF), and this data is named W2.
- 9) Set data: 30 to page: F, address: 0C, and press the PAUSE button of the adjusting remote commander.
- 10) Read the DDS display data, and this data is named W1.
- 11) Set data: 01 to page: 6, address: 01, and press the PAUSE button of the adjusting remote commander.
- 12) Read the DDS display data, and this data is named K1.
- 13) Set data: 40 to page: F, address: 0C, and press the PAUSE button.
- 14) Read the DDS display data, and this data is named K2.
- 15) Convert W1, W2, K1, K2 to decimal notation, and obtain W1', W2', K1', K2'. (Refer to “Hexadecimal notation-decimal notation conversion table” of “Data processing” of “Service mode”.)
- 16) Calculate X1' using the following equations (decimal notation calculation).

$$A' = W2' + K1' - W1' - K2' \dots\dots\dots \text{Equation 1}$$

$$B' = W1' - K1' \dots\dots\dots \text{Equation 2}$$

$$X1' = \frac{1600 + (48 \times A') - (16 \times B')}{A'} \dots\dots\dots \text{Equation 3}$$

- 17) Convert X1' to hexadecimal notation, and obtain X1. (Round off to one decimal place)
- 18) Set data: X1 to page: F, address: 0C, and press the PAUSE button of the adjusting remote commander.
- 19) Change the data of page: F, address: 0B, and adjust the DDS display data to “14”.
- 20) Press the PAUSE button of the adjusting remote commander.
- 21) Set data: 03 to page: 6, address: 01, and press the PAUSE button of the adjusting remote commander.
- 22) Read the DDS display data, and this data is named W0. If W0 lies within the “77” to “79” range, perform “Processing after completing adjustments”. If it lies outside the range, perform the following adjustments.
- 23) Convert W0 to hexadecimal notation, and obtain W0'.
- 24) Calculate X2' using the following equations (decimal notation calculation).

$$C' = W0' - B' - 20 \dots\dots\dots \text{Equation 4}$$

$$X2' = \frac{(100 - B') \times (X1' - 48) + 48 \times C'}{C'} \dots\dots\dots \text{Equation 5}$$

(X1' and B' are values obtained from equations 2 and 3)
- 25) Convert X2' to hexadecimal notation and obtain X2. (Round off to one decimal place)
- 26) Set data: X2 to page: F, address: 0C, and press the PAUSE button of the adjusting remote commander.
- 27) Change the data of page: F, address: 0B, and adjust the DDS display data to “78”.
- 28) Press the PAUSE button of the adjusting remote commander.
- 29) Set data: 01 to page: 6, address: 01, and press the PAUSE button of the adjusting remote commander.
- 30) Check that the DDS display data lies within the “13” to “15” range.

Processing after Completing Adjustments

- 1) Set data: 00 to page: D, address: 03, and press the PAUSE button of the adjusting remote commander.
- 2) Set data: 00 to page: 6, address: 01, and press the PAUSE button of the adjusting remote commander.
- 3) Set data: 00 to page: 6, address: 02.
- 4) Set data: 00 to page: 6, address: 00.
- 5) Set data: 00 to page: 1, address: 00.

8. Offset Check/Adjustment

Subject	Unrequired
Measurement Point	EVF DDS display
Measuring Instrument	
Adjustment Page	F
Adjustment Address	0D
Specified Value	50 to B0

Adjusting method:

- 1) Set data: 01 to page: 1, address: 00.
- 2) Set data: 21 to page: D, address: 03, and press the PAUSE button of the adjusting remote commander.
- 3) Set data: 01 to page: 6, address: 00.
- 4) Set data: 07 to page: 6, address: 01, and press the PAUSE button of the adjusting remote commander.
- 5) Set data: 14 to page: 6, address: 02.
- 6) Check that the DDS display data lies within the specified range. If it does not, change the data of page: F, address: 0D, and press the PAUSE button of the adjusting remote commander.
- 7) Set data: 15 to page: 6, address: 02.
- 8) Check that the DDS display data lies within the specified range. If it does not, change the data of page: F, address: 0D, and press the PAUSE button of the adjusting remote commander.
- 9) Set data: 16 to page: 6, address: 02.
- 10) Check that the DDS display data lies within the specified range. If it does not, change the data of page: F, address: 0D, and press the PAUSE button of the adjusting remote commander.
- 11) Set data: 05 to page: 6, address: 01, and press the PAUSE button of the adjusting remote commander.
- 12) Set data: 14 to page: 6, address: 02.
- 13) Check that the DDS display data lies within the specified range. If it does not, change the data of page: F, address: 0D, and press the PAUSE button of the adjusting remote commander.
- 14) Set data: 15 to page: 6, address: 02.
- 15) Check that the DDS display data lies within the specified range. If it does not, change the data of page: F, address: 0D, and press the PAUSE button of the adjusting remote commander.
- 16) Set data: 16 to page: 6, address: 02.
- 17) Check that the DDS display data lies within the specified range. If it does not, change the data of page: F, address: 0D, and press the PAUSE button of the adjusting remote commander.
- 18) Repeat steps 5) to 17) until the specified values have been satisfied in steps 6), 8), 10), 13), 15), and 17).

Processing after completing adjustments

- 1) Set data: 00 to page: D, address: 03, and press the PAUSE button of the adjusting remote commander.
- 2) Set data: 00 to page: 1, address: 00.
- 3) Set data: 00 to page: 6, address: 01, and press the PAUSE button of the adjusting remote commander.
- 4) Set data: 00 to page: 6, address: 00.
- 5) Set data: 00 to page: 6, address: 02.

9. Flange Back Adjustment

The flange back adjustment for the inner focus lens is performed automatically.

Subject	Chart for flange back adjustment (1989 ± 5 mm from the front side) of the lens protection glass (Luminance: 300 ± 50 lux)
Measurement Point	Check the operations on the TV monitor
Measuring Instrument	
Adjustment Page	F
Adjustment Address	A7 to AE

Adjusting method:

- 1) Check that the flange back adjustment chart center and the exposure display center coincide at both zoom lens TELE end and WIDE end.
- 2) Set data: 01 to page: 6, address: 00.
- 3) Check that the data of page: 6, address: 21 is 00.
- 4) Check that the page: F, address: A7 to AE data is at the initial value.

Address	Data
A7	0E
A8	5F
A9	14
AA	99
AB	10
AC	F2
AD	13
AE	60

- 5) Set data: 13 to page: 6, address: 01 and press the PAUSE button of the adjusting remote commander.
- 6) Set data: 15 to page: 6, address: 01, and press the PAUSE button of the adjusting remote commander.
(The adjustment data is automatically input to page: F, addresses: A7 to AE.)
- 7) Check that the data of page: 6, address: 21 is 01.
(Display indicating flange back adjustment completion)

Processing after completing adjustments

- 1) Set data: 00 to page: 6, address: 00.
- 2) Set data: 00 to page: 6, address: 21.
- 3) Turn off the main power supply (7.2V) and then turn on.
- 4) Perform "AF Temperature Sensor Reading" immediately.

10. AF Temperature Sensor Reading

Subject	Arbitrary
Measurement Point	Check the data of page: F,
Measuring Instrument	address: FA
Adjustment Page	F
Adjustment Address	FA
Specified Value	00 to 30

Note: This adjustment should be carried out upon completion of "Flange Back Adjustment".

Adjusting method:

- 1) set data: 01 to page: 6, address: 00.
- 2) Set data: 00 to page F, address: FA, and press the PAUSE button of the adjusting remote commander.
- 3) Set data: 35 to page 6, address: 01, and press the PAUSE button of the adjusting remote commander.
(The adjustment data of page: F, address: FA will be input automatically.)
- 4) Check that the data of page: 6, address: 11 is "01".
- 5) Set data: 00 to page: 6, address: 11.
- 6) Check that the data of page: F, address: FA is within the specification.

Processing after completing adjustments

- 1) Set data: 00 to page: 6, address: 00.
- 2) Set data: 00 to page: 6, address: 01, and press the PAUSE button of the adjusting remote commander.

11. Flange Back Check

Subject	Siemens star (2m from the front of the protection glass Luminance: 300 ± 50 lux)
Measurement Point	Check the operation on the
Measuring Instrument	TV monitor
Specified Value	Focused at the TELE end and WIDE end.

Checking method:

- 1) Place the Siemens star 2m from the front of the protection glass.
- 2) To open the IRIS, decrease the luminous intensity to the Siemens star up to a point before noise appears on the image.
- 3) Shoot the siemens star with the zoom TELE end.
- 4) Turn on the auto focus.
- 5) Check that the lens is focused, and turn off the auto focus
- 6) Shoot the siemens star with the zoom WIDE end.
- 7) Check that the lens is focused.

12. Picture Frame Setting

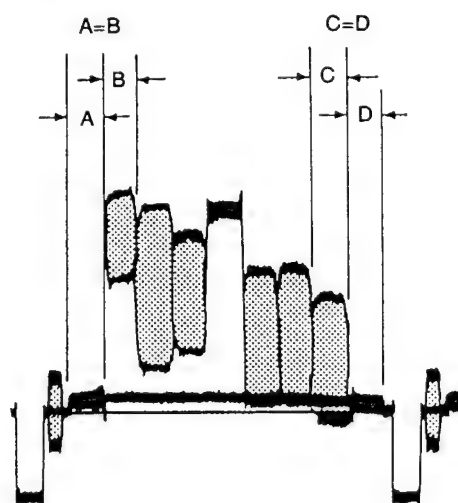
Subject	Color bar chart standard picture frame (1.5m from the front of the lens)
Measurement Point	Video output terminal
Measuring Instrument	Oscilloscope and TV monitor.
Specified Value	A=B, C=D, $t=0 \pm 0.1$ msec

Setting method:

- 1) Turn off the auto focus, and adjust the focus using the focus ring.
- 2) Adjust the zoom and the camera direction, and set to the specified position.
- 3) Mark the position of the picture frame on the monitor display, and adjust the picture frame to this position in following adjustments using "color bar chart standard picture frame".

Check on the oscilloscope

1. Horizontal period



2. Vertical period

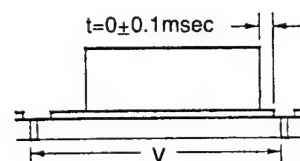


Fig. 6-1-7.

Check on the TV monitor

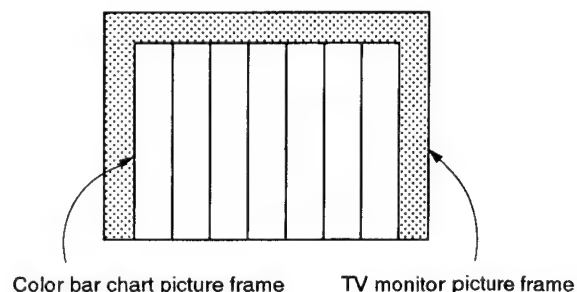


Fig. 6-1-8.

13. Auto White Balance Standard Data Reading

Subject	Clear chart
Measurement Point	Video output terminal
Measuring Instrument	Vectorscope GAIN: MAX
Adjustment Page	F
Adjustment Address	09, 0A
Specified Value	The white luminance point coincides with the origin.

Adjusting method:

- 1) Set data: 01 to page: 6, address: 00.
- 2) Set data: 0F to page: 6, address: 01, and press the PAUSE button of the adjusting remote commander.
- 3) Change the data of page: F, addresses: 09 and 0A, and coincide the white luminance point and origin.
(To write the data, press the PAUSE button of the adjusting remote commander each time the data is set.)

Processing after completing adjustments

- 1) Set data: 00 to page: 6, address: 01, and press the PAUSE button of the adjusting remote commander.
- 2) Set data: 00 to page: 6, address: 00.

14. IN/OUT Adjustment

For the unit to judge if the white balance is indoors or outdoors in auto white balance operations, measure the light level and write it in the EEPROM.

If the level is not correct, the white balance will not be accurate.

Subject	Clear chart (standard picture frame)
Measurement Point	DDS display of EVF or page A display data of the adjusting remote commander.
Measuring Instrument	
Adjustment Page	F
Adjustment Address	34, 35

Adjusting method:

- 1) Set data: 01 to page: 6, address: 00.
- 2) Set data: 01 to page: 1, address: 00.
- 3) Set data: 21 to page: D, address: 03, and press the PAUSE button of the adjusting remote commander.
- 4) Set data: 01 to page: 6, address: 15.
- 5) Set data: 0E to page: 6, address: 02.
- 6) Set data: 0B to page: 6, address: 01, and press the PAUSE button of the adjusting remote commander.
- 7) Read the DDS display data (Note 1) or page A display data of the adjusting remote commander (Note 2), and take the upper two digits as D1 and the lower two as D2.
- 8) Convert D1 to a decimal number and obtain D1'. (Refer to "Hexadecimal Notation-Decimal Notation Conversion Table" of "Data processing" of "Service mode".)

- 9) Calculate D3' using the following equations. (Equations 1 and 2 are for decimal notation calculation)

When $D2 \geq D0$

$$D3' = D1' - 21 \dots\dots\dots \text{Equation 1}$$

When $D2 < D0$

$$D3' = D1' - 22 \dots\dots\dots \text{Equation 2}$$

- 10) Convert D3' to a hexadecimal number and obtain D3.
- 11) Set D3 to page: F, address: 34, and press the PAUSE button of the adjusting remote commander.
- 12) Set data: 09 to page: 6, address: 01, and press the PAUSE button of the adjusting remote commander.
- 13) Read the DDS display data (Note 1) or page A display data of the adjusting remote commander (Note 2), and take the upper two digits as D4 and the lower two as D5.
- 14) Convert D4 to a decimal number and obtain D4'. (Refer to "Hexadecimal Notation-Decimal Notation Conversion Table" of "Data processing" of "Service mode".)
- 15) Calculate D6' using the following equations. (Equations 3 and 4 are for decimal notation calculation)

When $D5 \geq F0$

$$D6' = D4' - 13 \dots\dots\dots \text{Equation 3}$$

When $D5 < F0$

$$D6' = D4' - 14 \dots\dots\dots \text{Equation 4}$$

- 16) Convert D6' to a hexadecimal number and obtain D6.
- 17) Set D6 to page: F, address: 35, and press the PAUSE button of the adjusting remote commander.

Note 1: The right four digits of the display data at the right bottom side of the EVF is the LIGHT LEVEL data.

Note 2: Page A display data.

A: XX: XX

Four digits data

Note 3: If the lower digits change severely and cannot be read, record it on a tape once, play it back by frame feeding, and obtain the average value.

Processing after Completing Adjustments

- 1) Set data: 00 to page: D, address: 03, and press the PAUSE button of the adjusting remote commander.
- 2) Set data: 00 to page: 1, address: 00.
- 3) Set data: 00 to page: 6, address: 01, and press the PAUSE button of the adjusting remote commander.
- 4) Set data: 00 to page: 6, address: 02.
- 5) Set data: 00 to page: 6, address: 15.
- 6) Set data: 00 to page: 6, address: 00.

15. MAX GAIN Adjustment

Correct difference in the max gain value caused by the minimum subject luminance level setting.

If the value varies, the video level required for low luminance cannot be obtained. (The image will become dark.)

Subject	Clear chart (Standard image frame)
Measurement Point	Video output terminal (Terminated at 75 Ω)
Measuring Instrument	Oscilloscope
Adjustment Page	F
Adjustment Address	75
Specified Value	A=415 \pm 20 mV (NTSC) A=430 \pm 20 mV (PAL)

Note: This adjustment should be carried out upon checking that the value specified for the "Base-band Adjustments" of "Video System Adjustments" has been satisfied.

- 1) Set data: 01 to page: 6, address: 00.
- 2) Set data: 01 to page: 6, address: 15.
- 3) Set data: 19 to page: 6, address: 01, and press the PAUSE button of the adjusting remote commander.
- 4) Change the data of page: F, address: 75, and set the CAM Y signal level (A) to the specified value.
- 5) Press the PAUSE button of the adjusting remote commander.

Processing after completing adjustments

- 1) Set data: 00 to page: 6, address: 01, and press the PAUSE button of the adjusting remote commander.
- 2) Set data: 01 to page: 6, address: 15.
- 3) Set data: 00 to page: 6, address: 00.

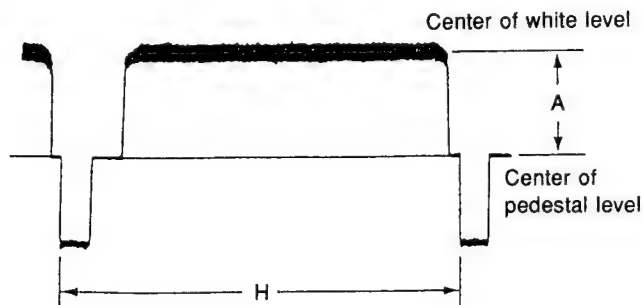


Fig. 6-1-9.

16. White Balance ND Filter Compensation Adjustment

Subject	Clear chart
Measurement Point	Video output terminal
Measuring Instrument	Vectorscope GAIN: MAX
Adjustment Page	F
Adjustment Address	6C, 6D
Specified Value	The white luminance point coincides with the origin.

Adjusting method:

- 1) Set the ND FILTER switch (lens block) to "ON" position.
- 2) Set data: 01 to page: 6, address: 00.
- 3) Set data: 0F to page: 6, address: 01, and press the PAUSE button of the adjusting remote commander.
- 4) Change the data of page: F, addresses: 6C and 6D, and coincide the white luminance point and origin.
(To write the data, press the PAUSE button of the adjusting remote commander each time the data is set.)

Processing after completing adjustments

- 1) Set the ND FILTER switch to "OFF" position.
- 2) Set data: 00 to page: 6, address: 01, and press the PAUSE button of the adjusting remote commander.
- 3) Set data: 00 to page: 6, address: 00.

17. Auto White Balance Adjustment

Adjust to the proper auto white balance output data.

If it is not correct, auto white balance and color reproducibility will be poor.

Subject	Clear chart (standard picture frame)
Filter	Filter C14 for color temperature correction
Measurement Point	Check with the DDS display on the
Measuring Instrument	EVF
Adjustment Page	F
Adjustment Address	30, 31
Specified Value	R ratio: 2940 to 29C0 B ratio: 6040 to 60C0

Adjusting method:

- 1) Place the C14 filter for color temperature correction on the lens.
- 2) Set data: 01 to page: 1, address: 00.
- 3) Set data: 21 to page: D, address: 03, and press the PAUSE button of the adjusting remote commander.
- 4) Set data: 01 to page: 6, address: 00.
- 5) Set data: D0 to page: F, address: 5B, and press the PAUSE button of the adjusting remote commander.
- 6) Set data: 04 to page: 6, address: 02.
- 7) Change the data of page: F, address: 30, and adjust the average value of the DDS display data (the display data at the bottom right of the EVF) to the R ratio specified value.
- 8) Press the PAUSE button of the adjusting remote commander.
- 9) Set data: 05 to page: 6, address: 02.
- 10) Change the data of page: F, address: 31, and adjust the average value of the DDS display data to the B ratio specified value.
- 11) Press the PAUSE button of the adjusting remote commander.

Processing after completing adjustments

- 1) Set data: E0 to page: F, address: 5B, and press the PAUSE button of the adjusting remote commander.
- 2) Set data: 00 to page: D, address: 03, and press the PAUSE button of the adjusting remote commander.
- 3) Set data: 00 to page: 6, address: 02.
- 4) Set data: 00 to page: 6, address: 00.
- 5) Set data: 00 to page: 1, address: 00.

18. Color Reproduction Adjustment (ND filter: OFF)

Adjust the HUE/GAIN of R-Y/B-Y so that the proper color reproduction is produced.

Subject	Color bar chart standard picture frame
Measurement Point	Video output terminal
Measuring Instrument	Vectorscope
Adjustment Page	F
Adjustment Address	17, 18, 19, 1A
Specified Value	All color luminance points should settle within each color reproduction frame.

This adjustment should be carried out upon completion of "Base-band Adjustments" of "VIDEO SYSTEM ADJUSTMENTS".

Adjusting method:

- 1) Set data: 01 to page: 6, address: 00.
- 2) Set data: 00 to page: 6, address: 03.
- 3) Set data: 0F to page: 6, address: 01, and press the PAUSE button of the adjusting remote commander.
- 4) Adjust the GAIN and PHASE of the vectorscope, and adjust the burst luminance point to the burst position of the color reproduction frame.
- 5) Change the data of addresses 17, 18, 19 and 1A of page: F, and settle each color luminance point in each color reproduction frame.

Note 1: Be sure to press the PAUSE button of the adjusting remote commander before changing the addresses.

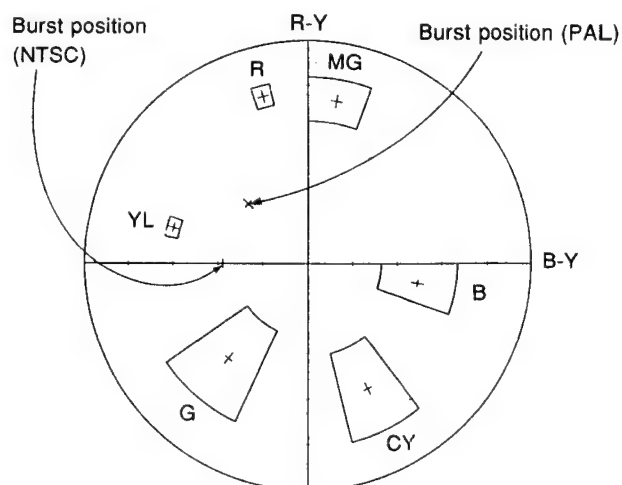
If not, the new data will not be written to the memory.

Note 2: The data of address: 19 and 1A should be "00" to "7F".

- 6) Press the PAUSE button of the adjusting remote commander.

Processing after completing adjustments

- 1) Set data: 00 to page: 6, address: 01 and press the PAUSE button of the adjusting remote commander.
- 2) Set data: 10 to page: 6, address: 03.
- 3) Set data: 00 to page: 6, address: 00.



19. Color Reproduction Adjustment (ND filter: ON)

Adjust the HUE/GAIN of R-Y/B-Y so that the proper color reproduction is produced.

Subject	Color bar chart standard picture frame
Measurement Point	Video output terminal
Measuring Instrument	Vectorscope
Adjustment Page	E
Adjustment Address	05, 06, 07, 08
Specified Value	All color luminance points should settle within each color reproduction frame.

This adjustment should be carried out upon completion of "Base-band Adjustments" of "VIDEO SYSTEM ADJUSTMENTS".

Adjusting method:

- 1) Set the ND FILTER switch (lens block) to "ON" position.
- 2) Set data: 01 to page: 6, address: 00.
- 3) Set data: 00 to page: 6, address: 03.
- 4) Set data: 0F to page: 6, address: 01, and press the PAUSE button of the adjusting remote commander.
- 5) Adjust the GAIN and PHASE of the vectorscope, and adjust the burst luminance point to the burst position of the color reproduction frame.
- 6) Change the data of addresses 05, 06, 07 and 08 of page: E, and settle each color luminance point in each color reproduction frame.

Note 1: Be sure to press the PAUSE button of the adjusting remote commander before changing the addresses.

If not, the new data will not be written to the memory.

Note 2: The data of address: 07 and 08 should be "00" to "7F".

- 7) Press the PAUSE button of the adjusting remote commander.

Processing after completing adjustments

- 1) Set the ND FILTER switch to "OFF" position.
- 2) Set data: 00 to page: 6, address: 01 and press the PAUSE button of the adjusting remote commander.
- 3) Set data: 10 to page: 6, address: 03.
- 4) Set data: 00 to page: 6, address: 00.

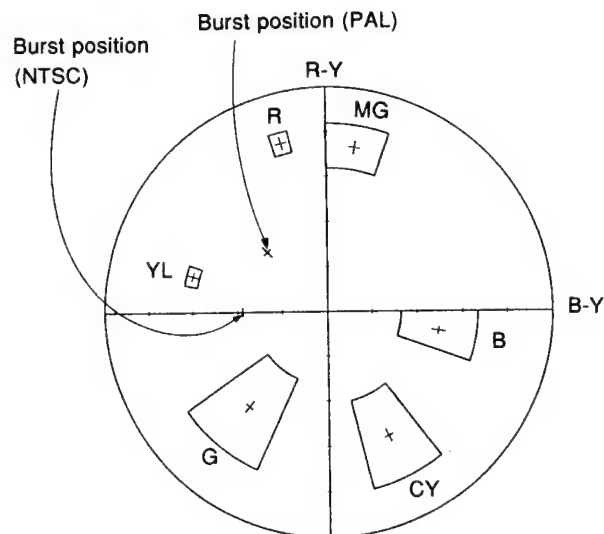


Fig. 6-1-11.

20. ∞ Position Input

Subject	Subjects further by more than 500m (Objects with clear contrast such as buildings, etc.)
Adjustment Page	F
Adjustment Address	AF, C3

Adjusting method:

- 1) Expose subjects further by more than 500m with the TELE end.
- 2) Check that the data of page: 6, address: 21 is "00".
- 3) Set data: 01 to page: 6, address: 00.
- 4) Check that the data of page: F, addresses: AF and C3 is the initial value.

Address	Data
AF	10
C3	10

- 5) Set data: 13 to page: 6, address: 01, and press the PAUSE button of the adjusting remote commander.
- 6) Obtain the suitable image using the ND filter.
- 7) Set data: 29 to page: 6, address: 01, and press the PAUSE button of the adjusting remote commander.
- 8) Check that the data of page: 6, address: 21 is 01.
(The adjustment data will automatically be input to page: F, address: AF, C3.)
- 9) Set data: 00 to page: 6, address: 21.

Processing after completing adjustments

- 1) Set data: 00 to page: 6, address: 01, and press the PAUSE button of the adjusting remote commander.
- 2) Set data: 00 to page: 6, address: 00.

21. ∞ Position Check

Subject	Subjects further by more than 500m (Objects with clear contrast such as buildings, etc.)
Measurement Point	Check on the EVF
Measuring Instrument	
Specified Value	Focused (▶◀) and infinity (∞) marks both light up simultaneously

Adjusting method:

- 1) Open the iris. (Using the ND filter or high speed shutter.)
- 2) Expose subjects further by more than 500m with the TELE end.
- 3) Rotate the focus ring from the NEAR side the INFINITY side, and when a subject which is more than 500m away is focused, check that the Focused (▶◀) and infinity (∞) marks light up simultaneously.

22. Steady shot adjustment

- Perform the steady shot adjustment only when replacing the angular velocity sensor. When the microprocessor, circuit, etc. malfunctions, do not perform this adjustment but check operations only.
- Record the sensitivity label of the angular velocity sensor (repair part), including to which side of the board it was attached to, etc.

If it has been attached incorrectly, the image will move up and down or to the left and right during steady shot operation. Be sure to take note of this.

Note on Angular Velocity Sensor

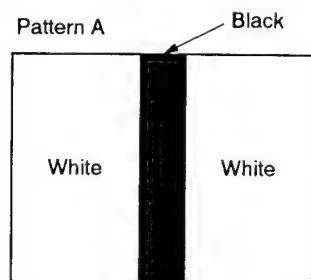
The sensor contains a high precision oscillator. Therefore handle it with extreme care as dropping it, etc. will disturb the balance of the oscillator and result in incorrect operations.

Switching Settings

- 1) Steady shot switch (LI-49 board S604)ON
- 2) Digital zoom switch (Menu screen)OFF

22-1. Steady Shot Adjustment (1)

Subject	Pattern A
Measuring point	Video output terminal
Measuring device	Oscilloscope
Adjustment page	F
Adjustment address	E1



A4 size (297 mm × 210 mm)

Fig. 6-1-12.

Adjusting method:

- 1) Expose pattern A with the zoom TELE end.
Note: Digital zoom (Menu screen) OFF
- 2) Adjust the inclination of the camera so that the vertical black line comes to the center of the screen.
- 3) Set data: 01 to page: 6, address: 00.
- 4) Set data: 08 to page: F, address: EF, and press the PAUSE button of the adjusting remote commander.
- 5) Adjust to the falling edge of the waveform with vertical scale on the oscilloscope. (Oscilloscope is H period).

- 6) Set data: 07 to page: F, address: EF, and press the PAUSE button of the adjusting remote commander.
At this time, measure the moving amount $t1$ (μ sec) of the falling edge of the waveform.

- 7) Obtain $DE1'$ using the following equation (decimal calculation).

$$DE1' = \frac{3.94}{t1} \times \frac{1.00}{\text{SE401 sensor sensitivity}} \times 101$$

Note: The SE401 sensor sensitivity of the SE-35 board is labeled only on the repair part.

- 8) Raise $DE1'$ to a whole number, convert it to a hexadecimal digit and take this as $DE1$. (Refer to "Hexadecimal Digit-Decimal Digit Conversion Table" of "Data processing" of "Service mode".)
- 9) Set $DE1$ to page F, address: E1, and press the PAUSE button of the adjusting remote commander.
- 10) Set data: 08 to page F, address: EF, and press the PAUSE button of the adjusting remote commander.

Procedure after adjustment

- 1) Set data: 00 to page: 6, address: 00.
- 2) Check that the steady shot operation is performed normally.

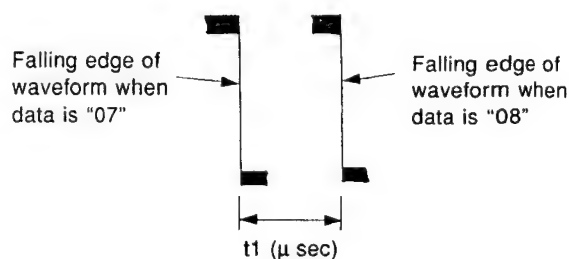
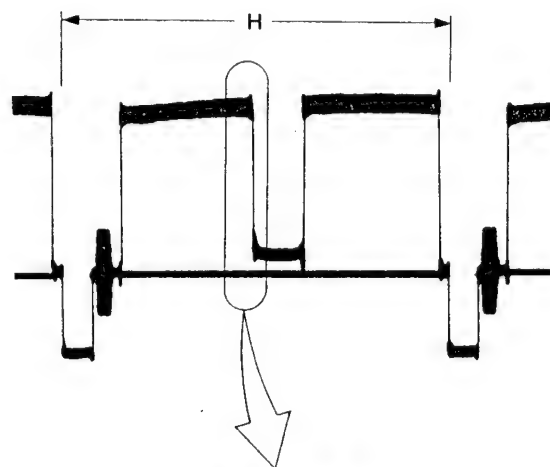


Fig. 6-1-13.

22-2. Steady Shot Adjustment (2)

Subject	Pattern B
Measuring point	Video output terminal
Measuring device	Oscilloscope
Adjustment page	F
Adjustment address	E0

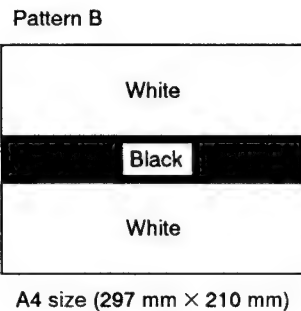


Fig. 6-1-14.

Adjusting method:

- 1) Expose pattern B with the zoom TELE end.
Note: Digital zoom (Menu screen)..... OFF
- 2) Adjust the inclination of the camera so that the horizontal black line comes to the center of the screen.
- 3) Set data: 01 to page: 6, address: 00.
- 4) Set data: 08 to page: F, address: ED, and press the PAUSE button of the adjusting remote commander.
- 5) Adjust the falling edge of the waveform with horizontal scale on the oscilloscope. (Oscilloscope is V period).
- 6) Set data: 07 to page: F, address: ED, and press the PAUSE button of the adjusting remote commander.

At this time, measure the moving amount t_2 (msec) of the falling edge of the waveform.

- 7) Obtain $DE0'$ using the following equation (decimal calculation).

$$DE0' = \frac{1.53}{t_2} \times \frac{0.96}{\text{SE402 sensor sensitivity}} \times 103$$

Note: The SE402 sensor sensitivity of the SE-35 board is labeled only on the repair part.

- 8) Raise $DE0'$ to a whole number, convert it to a hexadecimal digit and take this as $DE0$. (Refer to "Hexadecimal Digit-Decimal Digit Conversion Table" of "Data processing" of "Service mode".)
- 9) Set $DE0$ to page F, address: E0, and press the PAUSE button of the adjusting remote commander.
- 10) Set data: 08 to page F, address: ED, and press the PAUSE button of the adjusting remote commander.

Procedure after adjustment

- 1) Set data: 00 to page: 6, address: 00.
- 2) Check that the steady shot operation is performed normally.

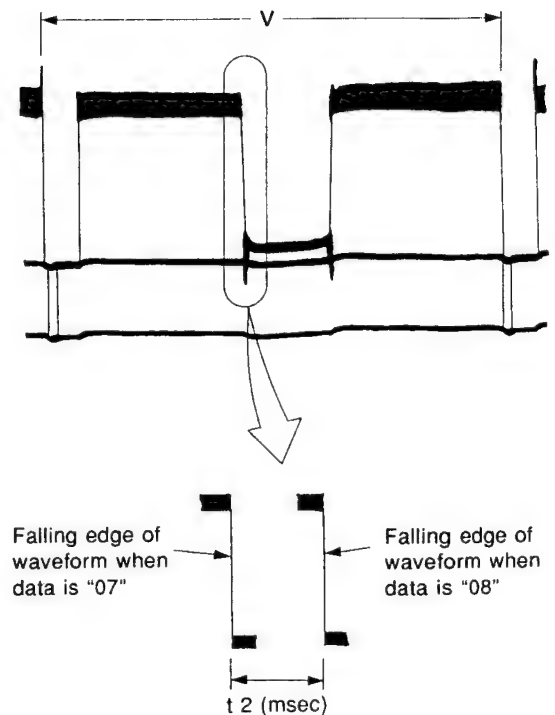


Fig. 6-1-15.

1-3. COLOR ELECTRONIC VIEWFINDER SYSTEM ADJUSTMENTS (DCR-VX700/VX700E/VX1000/VX1000E)

Note 1: The backlight (fluorescent tube) is driven by a high voltage AC power supply.

Therefore, be careful not to touch the backlight holder as you will receive an electric shock.

Note 2: When replacing the LCD unit, ensure there will be no damages by static electricity.

Note 3: Set the EVF MODE in the menu display to the following positions.

BRIGHT Center

COLOR Center

Note 4: NTSC model: DCR-VX700/VX1000

PAL model: DCR-VX700E/VX1000E

[Adjusting connector]

Some measuring points for adjusting the view-finder are concentrated at CN902 of the VF-74 board. Connect the measuring equipments via the Multi CPC jig or CP jig-2. The following table lists the pin numbers and signal names of CN902.

Pin No.	Signal Name	Pin No.	Signal Name
1	LC COM	2	EVF GND
3	G OUT	4	13.5V
5	ZEBRA GRAY	6	12V
7	R OUT	8	B OUT
9	SLYT	10	PCO
11	UNREG +	12	NC
13	CLP Y	14	UNREG -

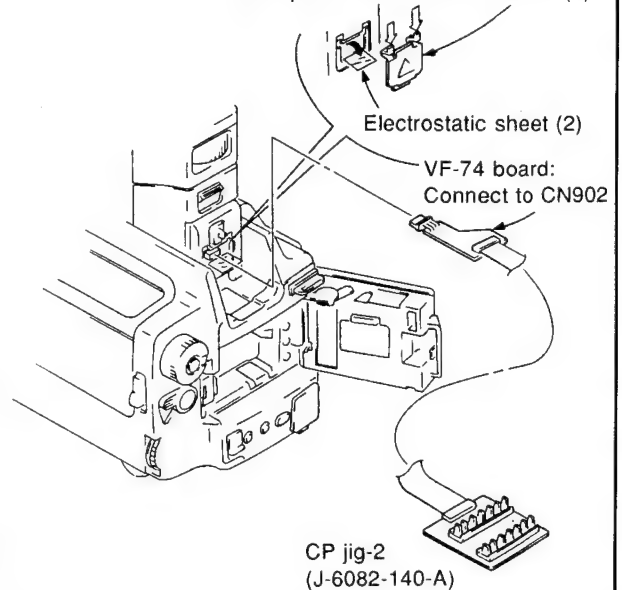
Table 6-1-3.

CP jig-2 Parts Code : J-6082-140-A

Multi CPC jig Parts Code : J-6082-311-A

[DCR-VX1000/VX1000E]

Remove the VF adjustment cover pressing two positions of arrows, and open the electrostatic sheet (2).



[DCR-VX700/VX700E]

Remove the VF adjustment cover pressing two positions of arrows, and open the electrostatic sheet (2).

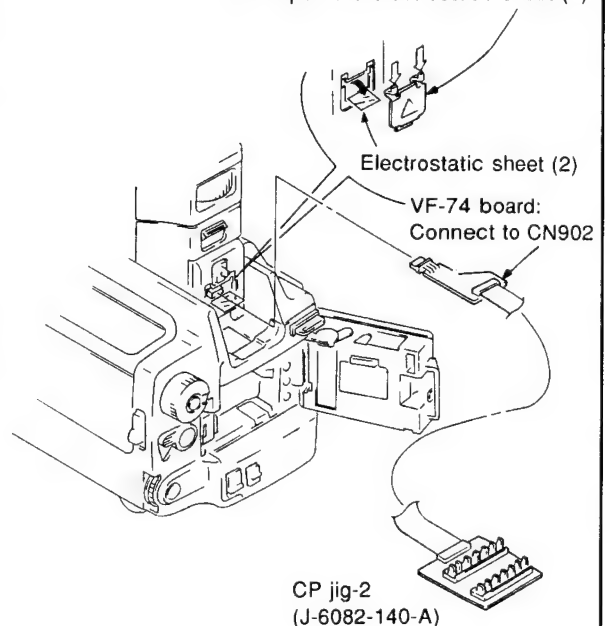


Fig. 6-1-16.

[Power Supply Voltage]

Adjust the power supply voltage for the battery pin so that Pin ⑪ (UNREG +) of CN902 of the VF-74 board becomes 6.0 ± 0.05 Vdc.

1. Power Supply Voltage Check (VF-74 board)

Mode	Camera standby
Measuring Instrument	Digital voltmeter
13.5V check	
Measurement Point	Pin ④ of CN902
Specified Value	13.5 ± 0.3 Vdc
12.0V check	
Measurement Point	Pin ⑥ of CN902
Specified Value	12.0 ± 0.3 Vdc

2. EVR Initial Data Input

Mode	STOP
Signal	Arbitrary
Adjustment Page	D

Adjusting method:

- 1) Set data: 01 to page: 1, address: 00.
- 2) Select page D, and input the data in the following table.
Note: To write in the nonvolatile memory (EEPROM), press the PAUSE button of the adjusting remote commander each time the data is set.
- 3) Set data: 00 to page: 1, address: 00.

Address	Data	
	NTSC	PAL
3C	2B	2B
3D	00	FF
3E	90	90
3F	90	90
40	86	86
41	82	82
42	66	66
43	50	50
44	80	80
45	65	65
46	81	81
47	80	80

3. Current Consumption Adjustment (VF-74 board)

Adjust the luminance and color temperature of the back light. If these are not correct, the image will be brighter or darker than normal.

Mode	Camera standby
Measurement Point	+: Pin ⑪ of CN902 (UNREG +) -: Pin ⑭ of CN902 (UNREG -)
Measuring Instrument	Digital voltmeter
Adjustment Page	D
Adjustment Address	3C
Specified Value	29 ± 1 mVdc

Note 3: Wait for 30 secs. after the power supply has been turned on before this adjustment.

Adjusting method:

- 1) Check that the voltage of Pin ⑭ of CN902 is 6.0 ± 0.05 Vdc.
- 2) Set data: 01 to page: 1, address: 00.
- 3) Set data: 2B to page: D, address: 3C, and press the PAUSE button of the adjusting remote commander.
- 4) Change the data of page: D, address: 3C, and adjust the potential difference between Pin ⑪ of CN902 and Pin ⑭ of CN902 to the specified value.
- 5) Press the PAUSE button of the adjusting remote commander.
- 6) Set data: 00 to page: 1, address: 00.

4. VCO Adjustment (VF-74 board)

Set the free running frequency of the VCO.

If it is not correct, the image will waver.

Mode	Camera standby
Measurement Point	Pin ⑩ of CN902 (PCO)
Measuring Instrument	Oscilloscope (DC range)
Adjustment Page	D
Adjustment Address	3E
Specified Value	$A=1.8 \pm 0.05V$

Connection:

- 1) Connect Pin ⑨ (SLYT) of CN902 and Pin ② (GND) with a jumper wire.

Adjusting method:

- 1) Check the GND level of the oscilloscope.
- 2) Set data: 01 to page: 1, address: 00.
- 3) Set data: 09 to page: 5, address: 02.
- 4) Change the data of page: D, address: 3E, and adjust the PCO voltage (A) to the specified value.
- 5) Press the PAUSE button of the adjusting remote commander.
- 6) Set data: 00 to page: 5, address: 02.
- 7) Set data: 00 to page: 1, address: 00.

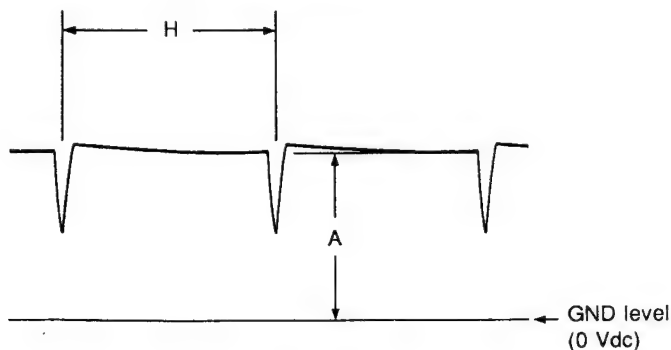


Fig. 6-1-17.

5. Bright Adjustment (VF-74 board)

Adjust to the proper LCD panel driving video signal level.

If it is not correct, the image will be saturated (whitish) or blackish.

Mode	Camera standby
Measurement Point	Pin ③ of CN902 (G OUT)
Measuring Instrument	Oscilloscope
Adjustment Page	D
Adjustment Address	3F
Specified Value	$A=7.0 \pm 0.1V$ (NTSC) $A=7.1 \pm 0.1V$ (PAL)

Connection:

- 1) Connect Pin ⑨ (SLYT) of CN902 and Pin ② (GND) with a jumper wire.

Adjusting method:

- 1) Set data: 01 to page: 1, address: 00.
- 2) Set data: 01 to page: 5, address: 02.
- 3) After memorizing data of address: 00 of page: 5, set data: B0 to the address.
- 4) Change the data of page: D, address: 3F, and adjust the potential difference (A) between the reversed waveform pedestal and the non reversed waveform pedestal to the specified value.
- 5) Press the PAUSE button of the adjusting remote commander.
- 6) Set data: 00 to page: 5, address: 02.
- 7) Set data memorized at step 3) to address: 00 of page: 5.
- 8) Set data: 00 to page: 1, address: 00.

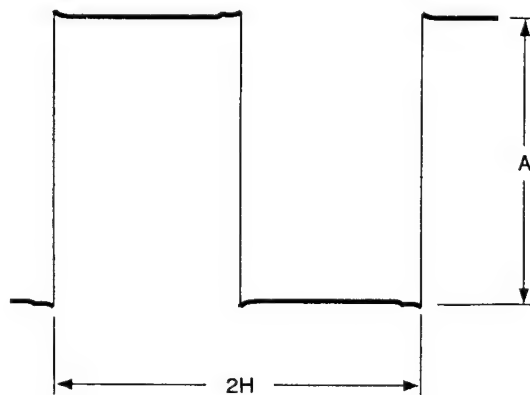


Fig. 6-1-18.

6. Contrast Adjustment (VF-74 board)

Set the contrast of the image.

If the contrast is not correct, the image will be blur (whitish) or saturated.

Mode	Camera standby
Measurement Point	Pin ③ of CN902 (G OUT)
Measuring Instrument	Oscilloscope
Adjustment Page	D
Adjustment Address	41
Specified Value	A=1.95 ± 0.1V (NTSC) A=1.85 ± 0.1V (PAL)

Connection:

- 1) Connect Pin ⑨ (SLYT) of CN902 and Pin ② (GND) with a jumper wire.

Adjusting method:

- 1) Set data: 01 to page: 1, address: 00.
- 2) Set data: 0A to page: 5, address: 02.
- 3) After memorizing data of address: 00 of page: 5, set data: B0 to the address.
- 4) Change the data of page: D, address: 41, and adjust the voltage (A) between the white (75%) and pedestal to the specified value.
- 5) Press the PAUSE button of the adjusting remote commander.
- 6) Set data: 00 to page: 5, address: 02.
- 7) Set data memorized at step 3) to address: 00 of page: 5.
- 8) Set data: 00 to page: 1, address: 00.

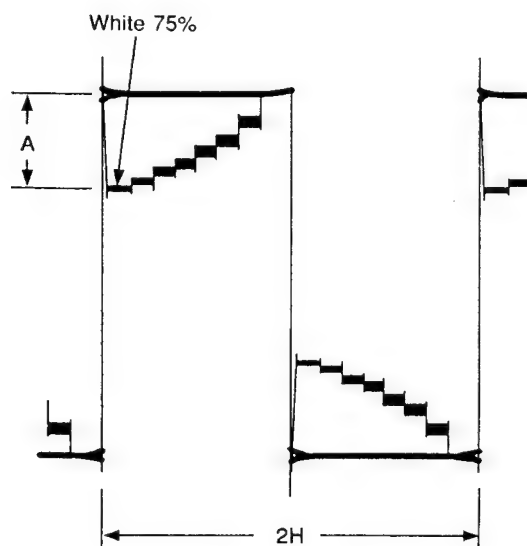


Fig. 6-1-19.

7. White Balance Adjustment

Adjust to the proper white balance level.

If it is not correct, the color reproducibility of the LCD panel will be poor.

Mode	Camera standby
Measurement Point	Check on the LCD display
Measuring Instrument	
Adjustment Page	D
Adjustment Address	44, 45
Specified Value	The display should not be colored

Connection:

- 1) Connect Pin ⑨ (SLYT) of CN902 and Pin ② (GND) with a jumper wire.

Note: Wait for more than 1 minute after the power supply has been turned on before this adjustment.

Adjusting method:

- 1) Set data: 01 to page: 1, address: 00.
- 2) Check that the data of page: D, address: 44 and 45 are at the initial value.

Address	Data
44	80
45	65

- 3) Set data: 03 to page: 5, address: 02.
- 4) After memorizing data of address: 00 of page: 5, set data: B0 to the address.
- 5) Check that the LCD display is not colored. If it is, change the data of address: B3 and address: B4 of page: D, and adjustment the display is not colored.
(Be sure to press the PAUSE button of the adjusting remote commander before changing the address.)
- 6) Set data: 00 to page: 5, address: 02.
- 7) Set data memorized at step 4) to address: 00 of page: 5.
- 8) Set data: 00 to page: 1, address: 00.

8. Zebra Gray Level Adjustment (VF-74 Board) (DCR-VX1000/VX1000E)

Adjust the gray level on the zebra display to a suitable value.

Mode	Camera standby
Measurement Point	CH1: Pin ⑤ of CN902 (ZEBRA GRAY) CH2: Pin ⑬ of CN902 (CLP Y)
Measuring Instrument	Oscilloscope (DC range)
Adjustment Page	D
Adjustment Address	43
Specified Value	$A = +155 \pm 20 \text{ mV}$

Adjusting method:

- 1) Set data: 01 to page: 1, address: 00.
- 2) Set data: 0A to page: 5, address: 02.
- 3) Equalize the GND levels of CH1 and CH2 of the oscilloscope.
- 4) Change the data of page: D, address: 43, and adjust the potential (A) of the ZEBRA GRAY signal (CH1) for the pedestal potential of the CLP Y signal (CH2).
- 5) Press the PAUSE button of the adjusting remote commander.
- 6) Set data: 00 to page: 5, address: 02.
- 7) Set data: 00 to page 1, address: 00.

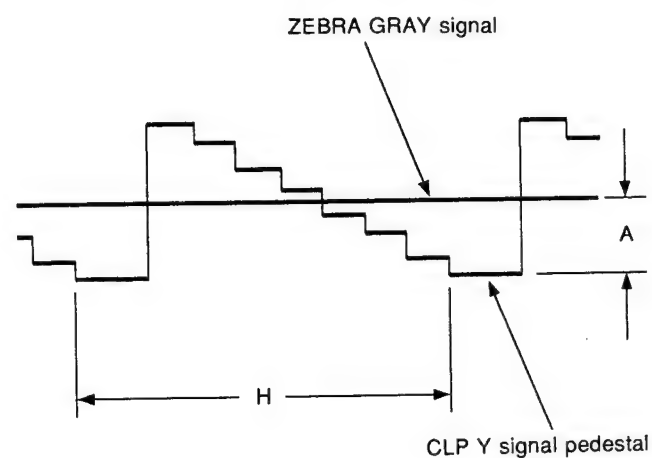
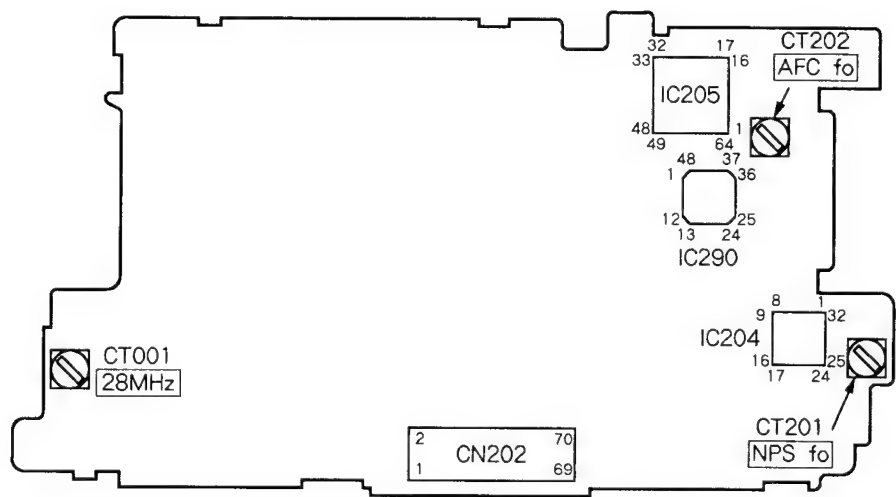


Fig. 6-1-20.

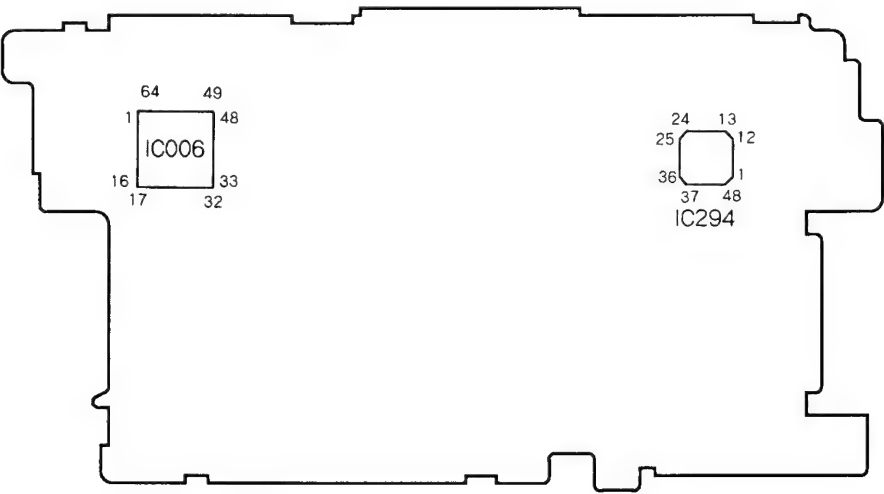
1-4. ARRANGEMENT DIAGRAM FOR ADJUSTMENT PARTS

DCR-VX1000/VX1000E

CB-49 BOARD (COMPONENT SIDE)

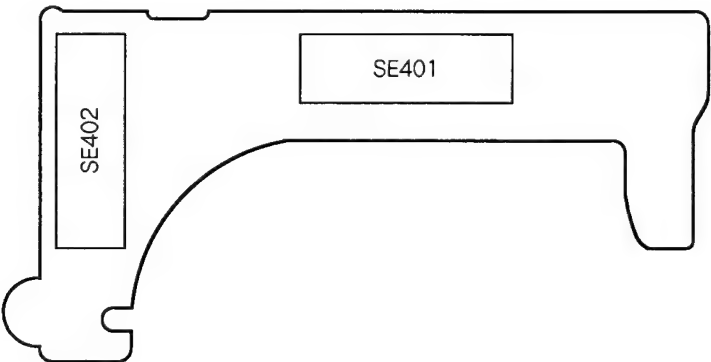


CB-49 BOARD (CONDUCTOR SIDE)



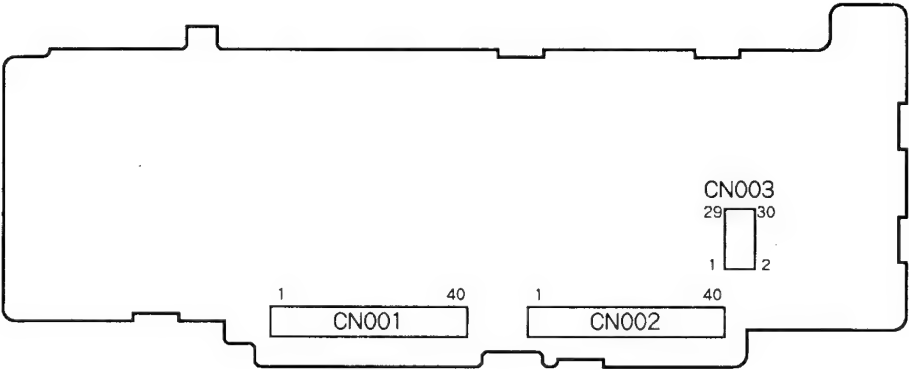
DCR-VX1000/VX1000E

SE-35 BOARD (COMPONENT SIDE)



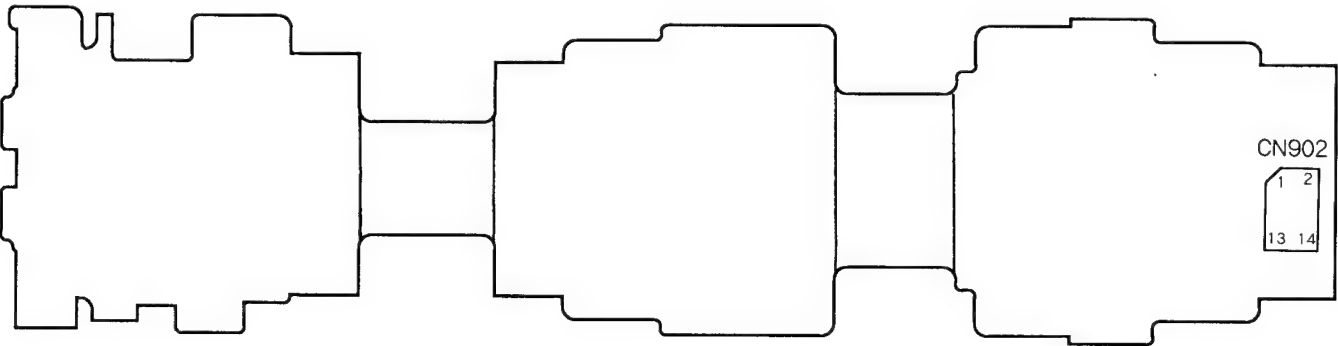
DCR-VX1000/VX1000E

DD-75 BOARD (CONDUCTOR SIDE)

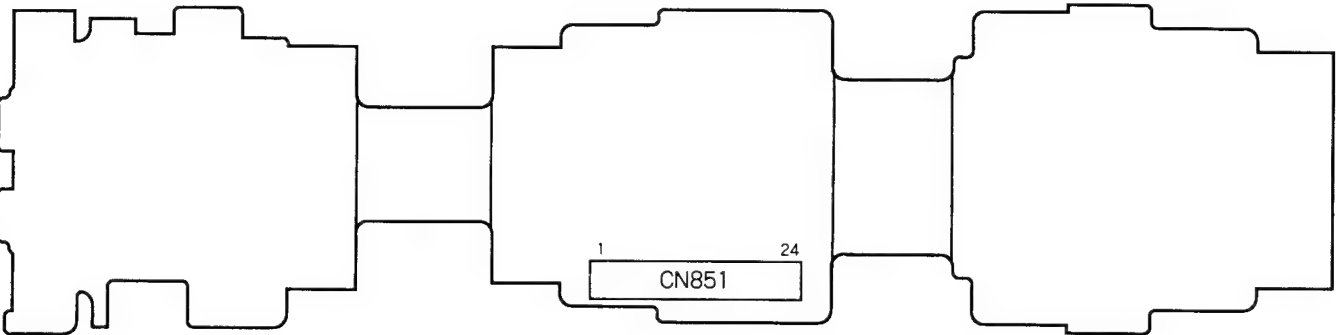


DCR-VX700/VX700E/VX1000/VX1000E

VF-74 BOARD (CONDUCTOR SIDE)



VF-74 BOARD (COMPONENT SIDE)



6-2. MECHANISM SECTION ADJUSTMENTS (DCR-VX700/VX700E/VX1000/VX1000E)

Mechanism Section Adjustments

For details of mechanism section adjustments, checks, and replacement of mechanism parts, refer to the separate volume "DV MECHANICAL ADJUSTMENT MANUAL I D Mechanism".

2-1. OPERATING WITHOUT CASSETTE

- 1) Refer to "2. Removal" and supply the power with the cabinet removed.
(Set the mechanism deck so that it can be operated. However, electrically connect the cabinet (R) because it incorporates the CC DOWN switch.)
- 2) Connect the adjusting remote commander to the remote terminal.
- 3) Turn on the HOLD switch of the adjusting remote commander.
- 4) Close the cassette compartment without the cassette to set the loading completed state.
- 5) Set data: 01 to page: 1, address: : 00.
- 6) Set data: F1 to page: C, address: 52, and press the PAUSE button of the adjusting remote commander.
- 7) Set data: 04 to page: D, address: 03, and press the PAUSE button of the adjusting remote commander.
- 8) Turn off the power.

The above procedure enables the mechanism to operate without the cassette. After checking operations, be sure to perform "Procedure After Checking Operations".

To use the "No-Cassette Operations Mode" and "Forced Power ON Mode" together, set the following data to page: D, address: 03.

Forced VTR power ON mode 06
Forced camera power ON mode 05

[Procedure after checking operations]

- 1) Set data: 01 to page: 1, address: 00.
- 2) Set data: FF to page: C, address: 52, and press the PAUSE button of the adjusting remote commander.
- 3) Set data: 00 to page: D, address: 03, and press the PAUSE button of the adjusting remote commander.
- 4) Set data: 00 to page: 1, address: 00.
- 5) Disconnect the power supply of the unit.

2-2. TAPE PATH ADJUSTMENT

1. Preparations for Adjustment

- 1) Clean the tape running side (tape guide, capstan shaft, pinch roller).
- 2) Connect the adjusting remote commander to the remote terminal.
- 3) Turn on the HOLD switch of the adjusting remote commander.
- 4) Select page: 3, address: 3C, and set data: 07.
- 5) Connect the oscilloscope.
Channel 1: RS-63/64 board, CN775 Pin ① (Note 1)
External trigger: RS-63/64 board, CN775 Pin ⑥
(Connect the trigger scope and oscilloscope via the multi CPC tool (J-6082-311-A) or CP jig-2 (J-6082-140-A).)
- 6) Playback an alignment tape (XH2-1) for tracking.
- 7) Check that the oscilloscope RF waveform is flat at the entrance and exit.
If not flat, adjust according to the separate volume "DV MECHANICAL ADJUSTMENT MANUAL I D Mechanism".
- 8) After completing the adjustment, perform "2. Procedure after checking operations".

Note 1: Connect Pins ① and ② (GND) of CN775 with 75Ω termination.

RS-63/64 Board CN775

Pin No.	Signal Name	Pin No.	Signal Name
1	RF MONTR	2	GND
3	ENV OUT	4	REF OUT
5	LOCK	6	JSWP J
7	SYCS	8	ERRP
9	VP CK CS	10	PLAJP
11	AF REF	12	SCDVCS
13	VA DC CS	14	ENV CONST

2. Procedure after operation

- 1) Connect the adjusting remote commander, and turn on the HOLD switch.
- 2) Select page: 3, address: 3C, and set data: 00.
- 3) Select page: 1, address: 00, and set data: 00.
- 4) Disconnect the power of the unit.

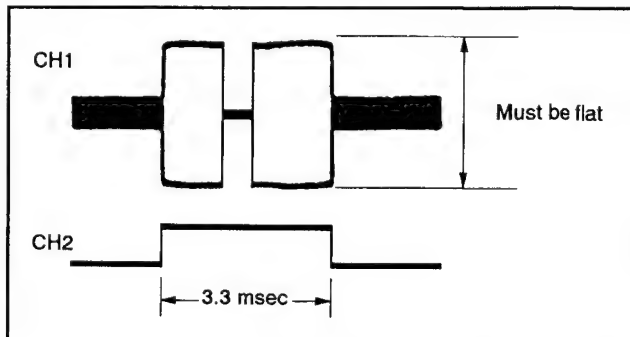


Fig. 6-2-1.

6-3. VIDEO SECTION ADJUSTMENTS (DCR-VX700/VX700E/VX1000/VX1000E)

When performing adjustments, refer to the layout diagrams for adjustment related parts on page 6-56.

Note: NTSC model: DCR-VX700/VX1000
PAL model: DCR-VX700E/VX1000E

3-1. PREPARATIONS BEFORE ADJUSTMENTS

Use the following measuring instruments for video section adjustments.

3-1-1. Equipment Required

- 1) TV monitor
- 2) Oscilloscope (dual-phenomenon, band above 30 MHz with delay mode) (Unless specified otherwise, use a 10: 1 probe.)
- 3) Frequency counter
- 4) Digital voltmeter
- 5) Audio generator
- 6) Audio level meter
- 7) Audio distortion meter
- 8) Audio attenuator
- 9) Stabilized power supply
- 10) Alignment tapes
 - Tracking standard (XH2-1)
Parts code: 8-967-997-01
 - SW/OL standard (XH2-3)
Parts code: 8-967-997-11
 - Audio operation check for NTSC (XH5-3)
Parts code: 8-967-997-51
 - System operation check for NTSC (XH5-5)
Parts code: 8-967-997-61
 - Audio operation check for PAL (XH5-3P)
Parts code: 8-967-997-55
 - System operation check for PAL (XH5-5P)
Parts code: 8-967-997-66
- 11) Remote commander for adjustment (J-6082-053-B)
- 12) CP jig-2 (J-6082-140-A)
- 13) Multi CPC tool (J-6082-311-A)
- 14) Extension board (70P, 0.5 mm)
Parts code: J-6082-321-A
- 15) Extension board (30P, 0.5 mm)
Parts code: J-6082-320-A
- 16) Extension board (48P, 0.8 mm)
Parts code: J-6082-177-A
- 17) Extension board (40P, 0.5 mm)
Parts code: J-6082-324-A
- 18) External power supply adapter
Parts code: J-6082-325-A

3-1-2. Precautions for Adjustments

- 1) The adjustments of this unit are performed in the VTR mode or camera mode.
To set the VTR mode, set the power switch to "Video or player" or set the "Forced VTR Power ON" mode using the adjusting remote commander (Note 1).
To set the camera mode, set the power switch to "Camera" or set the "Forced Camera Power ON" mode using the adjusting remote commander (Note 2).
After completing adjustments, be sure to exit the "Forced VTR Power ON" mode or "Forced Camera Power ON" mode (Note 3).
- 2) As a CC DOWN switch is provided on cabinet (R), this cabinet must be attached when performing adjustments and playback.
- 3) Cabinet (L) (standby switch, start/stop switch, zoom switch) is required to set the camera mode. But by setting the "Forced Camera Power ON" mode, it need not be connected. Disconnect the following connector when removing it.
 1. JC-12/14 board CN500 (10P, 0.8 mm)After completing adjustments, be sure to exit the "Forced Camera Power ON" mode.
- 4) The microphone amplifier (MA-219/244 board) need not be connected except for adjustments of the audio system. Disconnect the following connector when removing it. For DCR-VX1000/VX1000E (Store the microphone amplifier in the handle)
 1. AU-179 board CN002 (20P, 0.5 mm) or 20P connector of FP-215 (20P, 0.8 mm)For DCR-VX700/VX700E
 1. AU-187 board CN002 (14P, 0.8 mm)
- 5) The lens block need not be connected except for adjustments of the camera system (except for battery end adjustment/check).
Disconnect the following two connectors in adjustments.
For DCR-VX1000/VX1000E
 1. CB-49 board CN001 (30P, 0.5 mm)
 2. CB-49 board CN003 (42P, 0.8 mm)For DCR-VX700/VX700E
 1. CB-52 board CN001 (16P, 0.8 mm)
 2. CB-52 board CN003 (34P, 0.5 mm)
 3. CB-52 board CN004 (4P, 0.8 mm) (Focus ring)
- 6) The focus switch (DCR-VX1000/VX1000E FI4500 switch block) need not be connected except for adjustments of the camera system. Disconnect the following connector in adjustments.
 1. JC-12 board CN503 (5P, 0.8 mm)
- 7) Disconnect the following connector when not using the menu switch (FP-205/301 switch block).
 1. JC-12/14 board CN504 (7P, 0.5 mm)

- 8) Disconnect the following two connectors when not using the LCD and camera function switch after removing the cabinet. If the CN505 is disconnected, the lithium 3V power supply will also be disconnected and all data set by the user such as date, time, menu, etc. will be erased. Set these data again after completing the adjustments.
1. JC-12/14 board CN505 (30P, 0.5 mm)
 2. JC-12/14 board CN506 (34P, 0.8 mm)

Note 1: Setting the “Forced VTR Power ON” Mode (VTR Mode)

- 1) Set data: 01 to page: 1, address: 00.
- 2) Set data: 02 to page: D, address: 03, and press the PAUSE button of the remote commander.

The above procedure will enable the VTR power to be turned on with cabinet (R) removed.

After completing adjustments, be sure to exit the “Forced VTR Power ON” mode.

Note 2: Setting the “Forced Camera Power ON” Mode (Camera Mode)

- 1) Set data: 01 to page: 1, address: 00.
- 2) Set data: 01 to page: D, address: 03, and press the PAUSE button of the remote commander.

The above procedure will enable the camera power to be turned on with cabinet (L) or (R) removed.

After completing adjustments, be sure to exit the “Forced VTR Power ON” mode.

Note 3: Exiting the “Forced Power ON” Mode

- 1) Set data: 01 to page: 1, address: 00.
- 2) Set data: 00 to page: D, address: 03, and press the PAUSE button of the remote commander.
- 3) Set data: 00 to page: 1, address: 00.

3-1-3. Adjusting Connectors (RS-63/64 Board CN775)

Some of the adjusting points of the video section are concentrated at CN775 of the RS-63/64 board. Connect the instruments via the multi CPC tool (J-6082-311-A) or CP jig-2 (J-6082-140-A).

Pin No.	Signal Name	Pin No.	Signal Name
1	RF MONTR	2	GND
3	ENV OUT	4	REF OUT
5	LOCK	6	JSWP J
7	SYCS	8	ERRP
9	VP CK CS	10	PLAJP
11	AF REF	12	SCDVCS
13	VA DC CS	14	ENV CONST

Table. 6-3-1

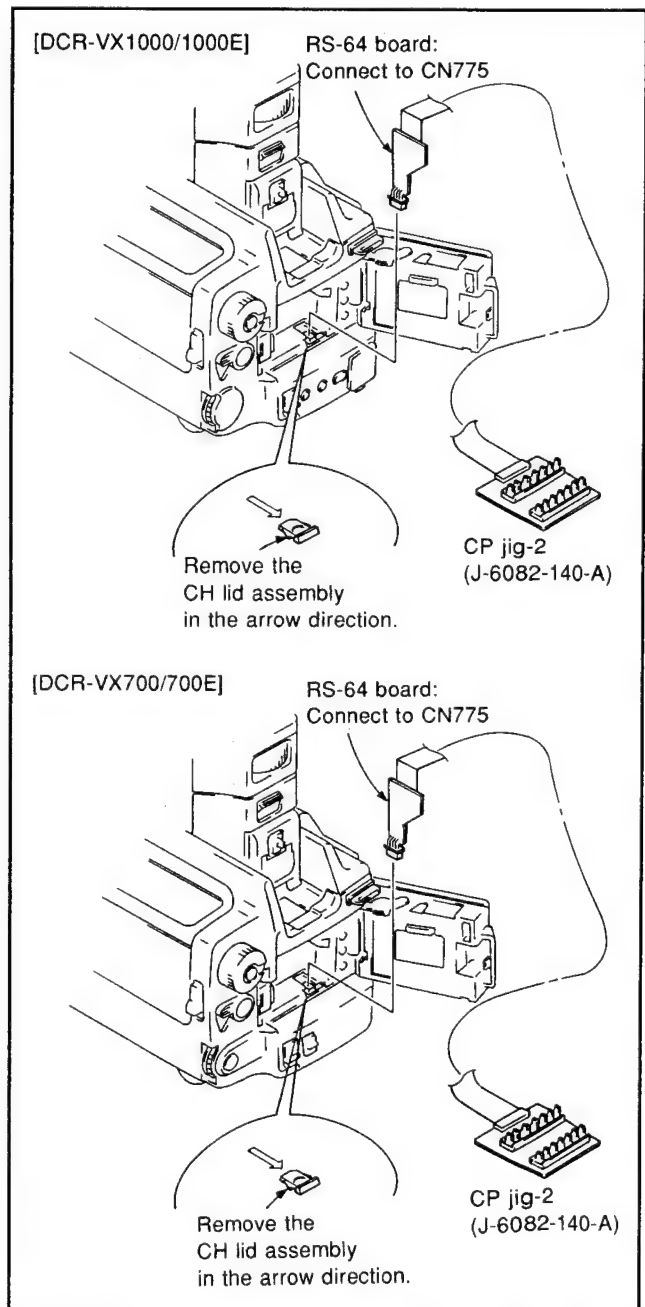


Fig. 6-3-1

3-1-4. Connection of Equipment

Connect the measuring instruments as shown in Fig. 6-3-2.

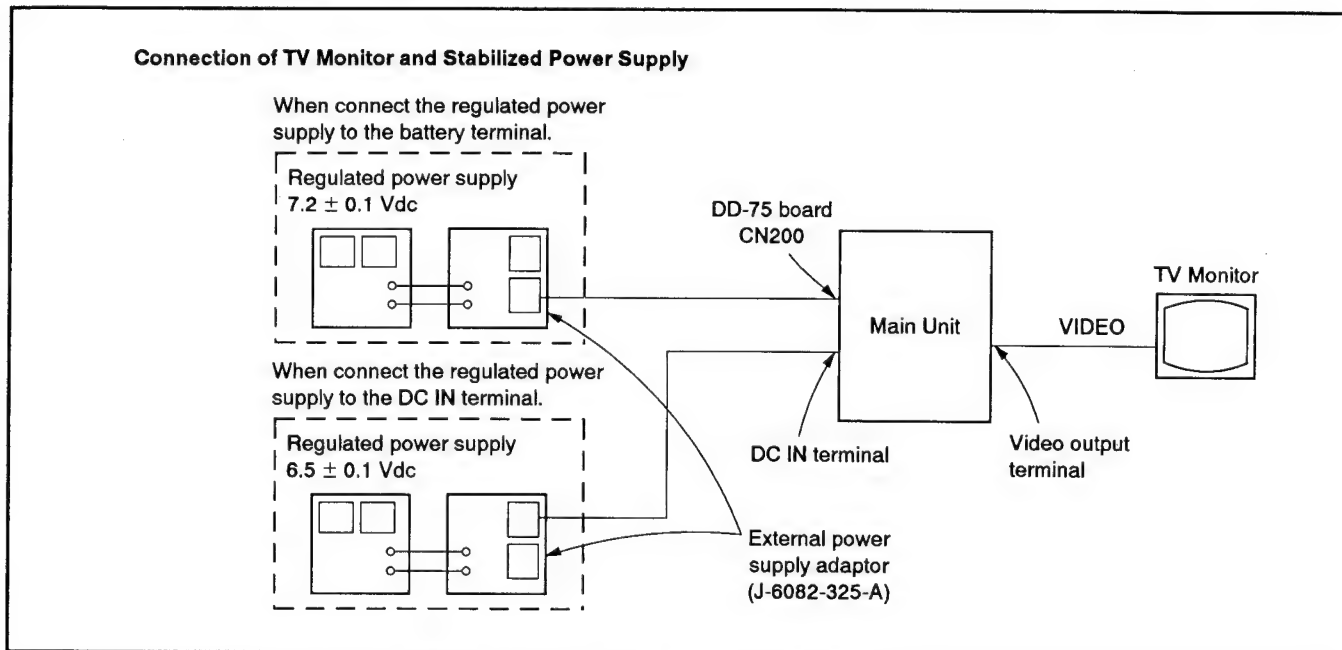


Fig. 6-3-2

3-1-5. Alignment Tapes

Use the alignment tapes shown in the following table.

Use tapes specified in the signal column of each adjustment.

Name	Use
Tracking standard (XH2-1)	Tape path adjustment
SW/OL standard (XH2-3)	Switching position adjustment
Audio operation check (XH5-3 (NTSC), XH5-3P (PAL))	Audio system adjustment
System operation check (XH5-5 (NTSC), XH5-5P (PAL))	Operation check

Table 6-3-2.

Fig. 6-3-3 shows the 75% color bar signals recorded on the alignment tape for Audio Operation Check (NTSC).

Note: Measure with video terminal (Terminated at 75 Ω)

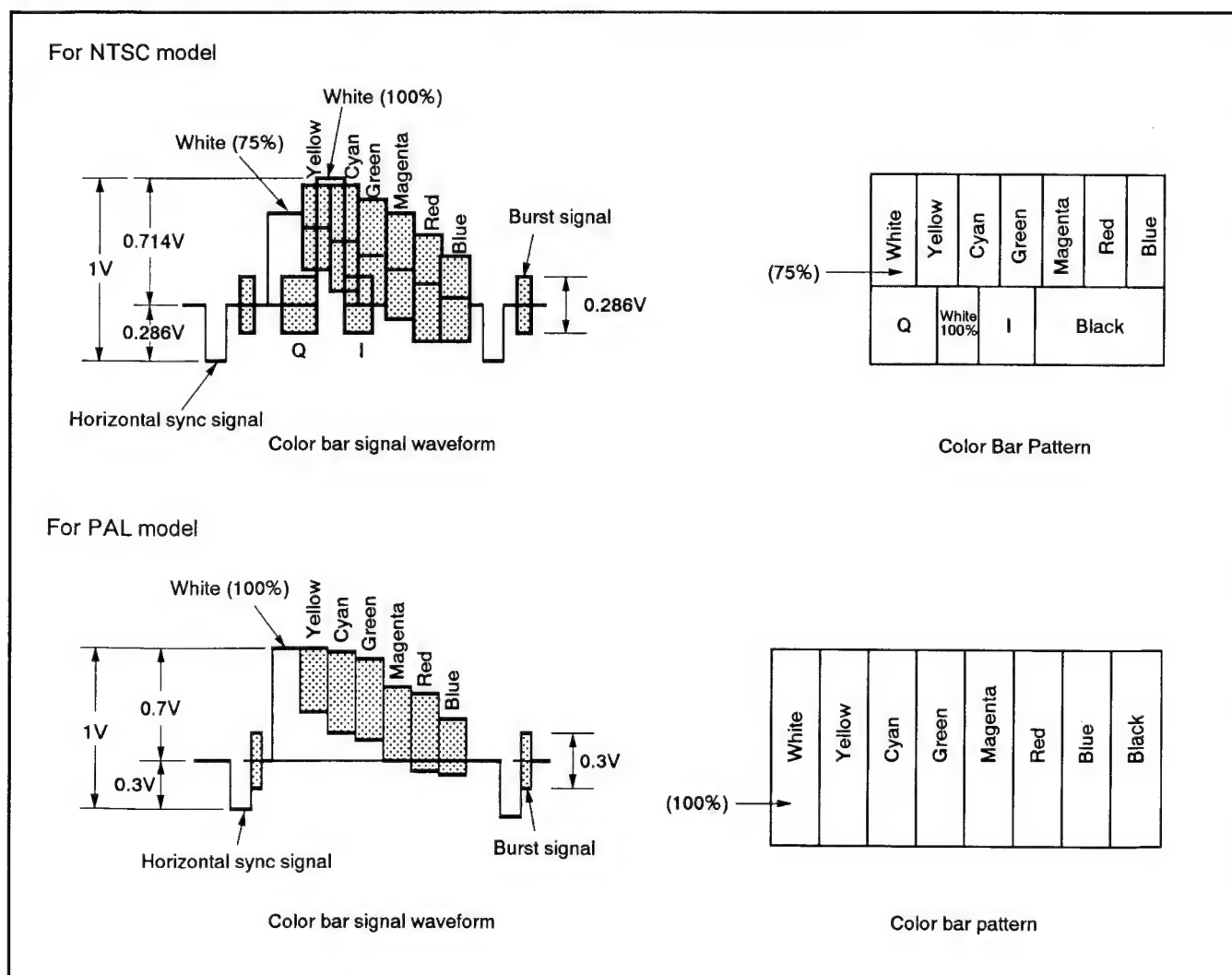


Fig. 6-3-3. Color Bar Signal of Alignment Tapes

3-1-6. Output Level and Impedance

Video output

Pin jack

Output signal: 1 Vp-p, 75 Ω unbalanced, negative sync

S video output

4-pin mini DIN

Luminance signal: 1 Vp-p, 75 Ω unbalanced, negative sync

Color signal: 0.286 Vp-p, 75 Ω unbalanced (NTSC)
: 0.300 Vp-p, 75 Ω unbalanced (PAL)

Audio output

Pin jack

Output level: -7.5 dBs (47 k Ω negative load)

Output impedance: Below 2.2 k Ω

3-1-7. Page D Address List

Note 1: The adjustment data initial value is the data input before the video section adjustments (Page D) are performed when the page D data have been lost accidentally.

Note 2: The ← mark shown in the adjustment data memory column indicates that the address data is fixed and is the same as the initial value.

Note 3: If the remote control ID is registered, the ID code is listed.

Address	Adjustment Data	
	Initial Value	Memory Column
00		
01		
02	10	←
03	00	←
04	00	←
05	00	←
06	67	
07	6B	
08	7D	
09	87	
0A	8D	
0B	6E	
0C	07	←
0D	00	←
0E	00	←
0F	06 (DCR-VX1000/ VX1000E) 00 (DCR-VX700/ VX700E)	←
10	00	←
11	12 (NTSC)/44 (PAL)	←
12	28	←
13	00	←
14	0D (NTSC)/0B (PAL)	←
15		
16	21	←
17	25	←
18	19 (DCR-VX1000/ VX1000E) 3F (DCR-VX700) 43 (DCR-VX700E)	←
19	82	←
1A	54	←

Table 6-3-3 (1).

Address	Adjustment Data	
	Initial Value	Memory Column
1B	34 (DCR-VX1000/ VX1000E) 74 (DCR-VX700/ VX700E)	←
1C	28	←
1D	26	←
1E	00	←
1F	11	←
20	65	←
21	43	←
22	65 (NTSC)/F8 (PAL)	←
23	43 (NTSC)/3F (PAL)	←
24	73	←
25	00	
26	FF	Note 3
27	FF	Note 3
28	FF	Note 3
29	00	←
2A	80	
2B	40	
2C	01	
2D	01	
2E	01 (DCR-VX1000) 04 (DCR-VX1000E) 03 (DCR-VX700) 05 (DCR-VX700E)	
2F	00	
30	00	
31	08	
32	00	
33	46	
34	28 (NTSC)/26 (PAL)	
35	3A (NTSC)/35 (PAL)	
36	58 (NTSC)/4E (PAL)	
37	94 (NTSC)/80 (PAL)	
38		
39		
3A		
3B		
3C	2B	
3D	00 (NTSC)/FF (PAL)	←
3E	90	
3F	90	
40	86	←

Table 6-3-3 (2).

Address	Adjustment Data	
	Initial Value	Memory Column
41	82	
42	66	←
43	50	
44	80	
45	65	
46	81	←
47	80	←
48	D0	
49	7C	
4A	B3	
4B	00	←
4C	D4	
4D	6D	
4E	9D	
4F	9D	
50	3E	
51	7C	←
52	5C	←
53	FF	
54		
55		
56		
57		

Table 6-3-3 (3).

3-2. POWER SUPPLY SYSTEM ADJUSTMENTS

1. Power Supply Voltage Check (DD-75 Board)

Mode	Camera recording
Subject	Arbitrary
Measurement Point	Digital voltmeter
INDI 3.0V check	
Measuring Instrument	Pins ⑮ and ⑰ of CN001 (CL006)
Specified Value	2.90 ± 0.11 Vdc
J1 3.0V check	
Measuring Instrument	Pins ⑲ and ⑳ of CN001 (CL007)
Specified Value	2.90 ± 0.11 Vdc
J2 3.0V check	
Measuring Instrument	Pins ㉒ to ㉔ of CN001 (CL008)
Specified Value	2.90 ± 0.11 Vdc
SS 5.0V check	
Measuring Instrument	Pins ㉖ and ㉗ of CN001 (CL009)
Specified Value	4.75 ± 0.15 Vdc
AUDIO 5.0V check	
Measuring Instrument	Pin ㉙ of CN001 (CL010)
Specified Value	4.75 ± 0.15 Vdc
AUDIO 3.3V check	
Measuring Instrument	Pin ㉛ of CN001 (CL011)
Specified Value	3.10 ± 0.12 Vdc
AUDIO 3.0V check	
Measuring Instrument	Pin ㉝ of CN001 (CL012)
Specified Value	2.90 ± 0.11 Vdc
SS15V check	
Measuring Instrument	Pin ㉟ of CN001 (CL013)
Specified Value	15.00 ± 0.50 Vdc
SS 3.3V check	
Measuring Instrument	Pin ㊱ of CN001 (CL014)
Specified Value	3.20 ± 0.12 Vdc (DCR-VX1000/ VX1000E)
	3.10 ± 0.12 Vdc (DCR-VX700/ VX700E)
EVF 5.0V, VIDEO 5.0V check	
Measuring Instrument	Pins ④ and ⑧ of CN002 (CL015)
Specified Value	4.75 ± 0.15 Vdc
MAGIC 3.3V check	
Measuring Instrument	Pins ⑰ and ⑱ of CN002 (CL016)
Specified Value	3.10 ± 0.12 Vdc
CAM 3.3V check (DCR-VX1000/VX1000E)	
Measuring Instrument	Pins ㉒ and ㉔ of CN002 (CL017)
Specified Value	3.20 ± 0.12 Vdc

CAM 3.6V check (DCR-VX700/VX700E)	
Measuring Instrument	Pins ㉒ and ㉔ of CN002 (CL017)
Specified Value	3.55 ± 0.12 Vdc
CAM D5.0V check	
Measuring Instrument	Pins ㉖ and ㉗ of CN002 (CL019)
Specified Value	4.90 ± 0.15 Vdc
CAM 5.0V check	
Measuring Instrument	Pins ㉙ to ㉛ of CN002 (CL020)
Specified Value	4.90 ± 0.15 Vdc

Mode	Camera recording
Subject	Arbitrary
Measurement Point	Digital voltmeter
CCD -8.5V check	
Measuring Instrument	Pin ㉞ of CN002 (CL021)
Specified Value	-8.5 ± 0.50 Vdc
CCD 15V check	
Measuring Instrument	Pins ㉟, ㊱ of CN002 (CL022)
Specified Value	15 ± 0.50 Vdc
VAP 5.0V check	
Measuring Instrument	Pin ㊱ of CN002 (CL024)
Specified Value	5.00 ± 0.15 Vdc
CAM MT5.0V check	
Measuring Instrument	Pin ㊱ of CN002 (CL025)
Specified Value	5.00 ± 0.15 Vdc
RP3.3V check	
Measuring Instrument	Pin ② of CN003 (CL027)
Specified Value	3.20 ± 0.12 Vdc (DCR-VX1000/ VX1000E)
	3.10 ± 0.12 Vdc (DCR-VX700/ VX700E)
RP 5.0V check	
Measuring Instrument	Pin ⑤ of CN003 (CL028)
Specified Value	4.75 ± 0.15 Vdc
RP 3.0V check	
Measuring Instrument	Pin ⑩ of CN003 (CL029)
Specified Value	2.90 ± 0.11 Vdc
RP 6.6V check	
Measuring Instrument	Pins ⑨ and ⑪ of CN003 (CL030)
Specified Value	6.30 ± 0.25 Vdc
EVER 3.2V check	
Measuring Instrument	Pin ⑥ of IC500 (CL512)
Specified Value	3.2 ± 0.14 Vdc

3-3. SYSTEM CONTROL SYSTEM ADJUSTMENTS

1. Page D Initial Value Input.

If the page D data has been erased by accident, input the page D initial value first before performing adjustments. For the initial value, refer to “3-1-7. Page D Address”.

Mode	Stop
Signal	Arbitrary
Adjustment Page	D
Adjustment Address	00 to 57

Input method:

- 1) Set data: 01 to page: 1, address: 00.
- 2) Select page D and input the initial value to each address. (After setting the data (initial value), before changing the address, be sure to press the PAUSE button of the adjusting remote commander.)
- 3) After inputting all initial values, set data: 00 to page: 1, address: 00.

2. Page C Data Initialization

Mode	Stop
Adjustment Page	C
Adjustment Address	00 to 6F

Initializing method:

- 1) Set data: 01 to page: 1, address: 00.
- 2) Set data: 01 to page: 4, address: 02, and press the PAUSE button of the remote commander.
- 3) Check that the data of page: 4, address: 02 changes in the order of “01”, “03”, “05”, and “00”.
- 4) Set data: 00 to page: 1, address: 00.

3. ID Port Threshold Level Adjustment (JC-12/14 Board)

Mode	Stop
Adjustment Page	D
Adjustment Address	2A, 2B

Connection: Eject the cassette and connect the following.

- 1) Connect Pin ⑥ of CN403 (CL473: CHIME SDA) and GND (CL531, etc.) with the 645 Ω resistor (accuracy $\pm 1\%$).
645 Ω resistor=620 Ω resistor+15 Ω resistor +10 Ω resistor
620 Ω resistor (Parts code: 1-215-416-00)
15 Ω resistor (Parts code: 1-215-377-00)
10 Ω resistor (Parts code: 1-215-373-31)
- 2) Connect Pin ⑧ of CN403 (CL474: CHIME SCK) and GND (CL531, etc.) with the 3.3 Ω resistor (accuracy $\pm 1\%$).
3.3 k Ω resistor (Parts code: 1-215-433-00)

Adjusting method:

- 1) Set data: 01 to page: 1, address: 00.
- 2) Set data: 10 to page: 5, address: 00.
- 3) Read the data of page: 5, address: 07, and take it as D07. (D07 is “10” to “54”).
- 4) Set D07 to page: D, address: 2B, and press the PAUSE button of the adjusting remote commander.
- 5) Read the data of page: 5, address: 08, and take it as D08. (D08 is “60” to “9D”).
- 6) Set D08 to page: D, address: 2A, and press the PAUSE button of the adjusting remote commander.
- 7) Set data: 30 to page: 5, address: 00.
- 8) Set data: 00 to page: 1, address: 00.

4. Battery End Adjustment

Regulates the battery end voltage.

If the voltage changes, the life of the battery will be shorten, or the battery end image will be distorted.

Mode	Camera recording
Signal	Arbitrary
Measurement Point	LCD display of adjusting remote commander
Measuring Instrument	
Adjustment Page	D
Adjustment Address	06, 07, 08, 09, 0A, 0B

Setting of switch

- 1) Auto focus switch Off

Connection

- 1) Connect the stabilized power supply and digital voltmeter to battery terminals as shown in the figure 6-3-4.

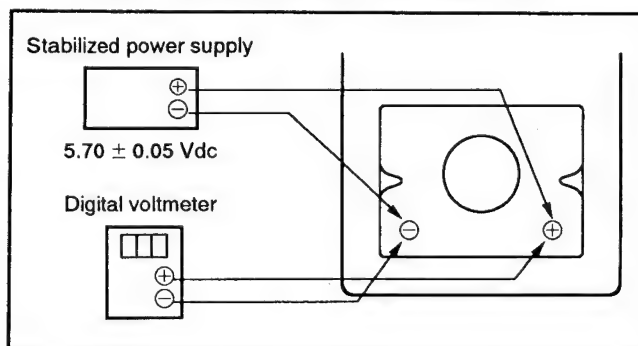


Fig. 6-3-4.

Adjusting method:

- 1) Adjust the stabilized power supply output voltage so that the digital voltmeter display becomes $7.2 \pm 0.1 \text{ Vdc}$.
- 2) Set data: 01 to page: 1, address: 00.
- 3) Set the camera recording mode.
- 4) Decrease the voltage so that the digital voltmeter display becomes $5.70 \pm 0.05 \text{ Vdc}$.
- 5) Select page: 2, address: 1A, and read the data displayed on the adjusting remote commander, and take this value as D06.
- 6) Set D06 to page: D, address: 06, and press the PAUSE button of the adjusting remote commander.
- 7) Convert D06 to a decimal digit, and take this value as D06'. (Refer to the Hexadecimal-Decimal Conversion Table in "Data Processing" in "Service Mode".)
- 8) Calculate the adjustment data (decimal) from the following equations (decimal calculation), convert the data to hexadecimal digits, and input to each adjustment addresses.

$$\text{Address: 07} \quad D07' = D06' + 4$$

$$\text{Address: 08} \quad D08' = D06' + 22$$

$$\text{Address: 09} \quad D09' = D06' + 32$$

$$\text{Address: 0A} \quad D0A' = D06' + 38$$

$$\text{Address: 0B} \quad D0B' = D06' + 7$$

Note: After setting the data, be sure to press the PAUSE button of the adjusting remote commander.

- 9) Set data: 00 to page: 1, address: 00.
- 10) Turn off the power supply.

3-4. SERVO SYSTEM ADJUSTMENTS

1. Switching Position Adjustments (RS-63/64 Board)

1-1. Switching Position Rough Adjustment

Mode	Playback
Signal	SW/OL reference tape
Measurement Point	CH1: Pin ① of CN775 (RF MONITOR) Note 2 CH2: Pin ⑥ of CN775 (JSWP)
Measuring Instrument	Oscilloscope TRIG. SOURCE: CH2
Adjustment Page	C
Adjustment Address	4C to 4F
Specified Value	T1=141 μ sec, T2=141 μ sec

Note 1: Connect a 75 Ω resistor between Pins ① and ② (GND) of CN775 (Parts code: 1-247-804-11).

Adjusting method:

- 1) Set data: 01 to page: 1, address: 00.
- 2) Write data: 00 to page: C, addresses: 4C to 4F.
(To write the data, press the PAUSE button of the adjusting remote commander each time data is set.)
- 3) Change the data of page: C, address: 4C, and take T1 as the specified value. (Note 3)
- 4) Press the PAUSE button of the adjusting remote commander.
- 5) Set data: 00 to page: 1, address: 00.
- 6) Perform the "RF Block Adjustment" of "VIDEO SYSTEM ADJUSTMENT" in advance, "Switching Position Fine Adjustments".

Note 2: If not adjusted accurately, "Switching Position Fine Adjustment" cannot be performed. The data displayed is fixed at 7F.

Note 3: If T1 does not satisfy the specified value even when the data of address: 4C is changed, change the data of address: 4D.

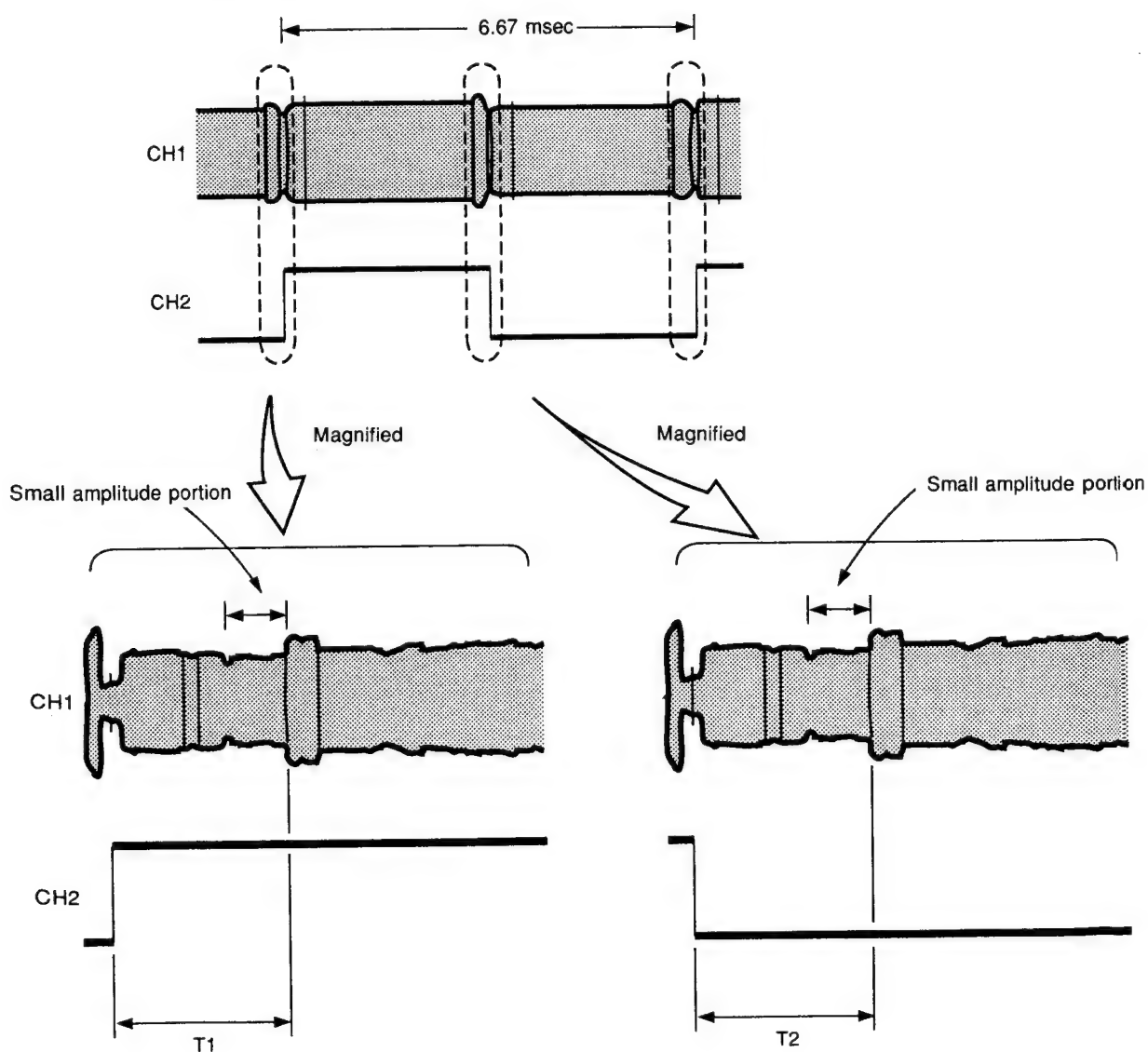


Fig. 6-3-4.

1-2. Switching Position Fine Adjustment

Mode	Playback
Signal	SW/OL reference tape
Measurement Point	Page: 3, addresses: 08 and 09 display data and Oscilloscope
Measuring Instrument	CH1: Pin ① of CN775 (RF MONITOR) Note 2 CH2: Pin ⑥ of CN775 (JSWP) TRIG, SOURCE: CH2
Adjustment Page	C
Adjustment Address	4C, 4E
Specified Value	The numbers "F8" to "FF" and "00" to "08" are displayed alternately and consistently at page: 3, addresses: 08 and 09.

Note 1: Reformat the "RF block Adjustment" of "VIDEO SYSTEM ADJUSTMENT" in advance.

Adjusting method:

- 1) Set data: 01 to page: 1, address: 00.
- 2) Set data: 03 to page: 3, address: 00, and press the PAUSE button of the adjusting remote commander.
- 3) Read the average value D08 of the data displayed for page: 3, address: 08, and calculate as follows using this value.
[If D08 is "80" to "FF"]
Obtain the revised value from the following equation, and deduct it from the data of page: C, address: 4C. (As the data is to be rewritten, press the PAUSE button of the adjusting remote commander.)
Revised value=FF-D08 (Hexadecimal calculation. Refer to the following table.)
[If D08 is "00" to "7E"]
Add D08 to the data of page: C, address: 4C. (As the data is to be rewritten, press the PAUSE button of the adjusting remote commander.)
[If D08 is "7F"]
It indicates that "Switching Position Rough Adjustment" is not completed. Repeat from step 3) of "Switching Position Rough Adjustment". (Note 5)

- 4) Read the displayed data of page: 3, address: 08, and check that the numbers "F8" to "FF" and "00" to "08" are displayed alternately and consistently at page: 3, address: 08.

(If the data changes rapidly and the lower digits cannot be read, check that "0" and "F" are displayed alternately and consistently at the upper digit of the data displayed. If they are not, repeat from step 3) of "Switching Position Rough Adjustment".)

- 5) Connect the oscilloscope to the measuring point.
- 6) Change the data of page: C, address: 4E, and set T2 as 141μ sec.
- 7) Press the PAUSE button of the adjusting remote commander.
- 8) Read the average value D09 of the displayed data of page: 3, address: 09, and calculate as follows using this value.
[If D09 is "80" to "FF"]
Obtain the revised value from the following equation, and deduct it from the data of page: C, address: 4E. (As the data is to be rewritten, press the PAUSE button of the adjusting remote commander.)
Revised value=FF-D09 (Hexadecimal calculation. Refer to the following table.)
[If D09 is "00" to "7E"]
Add D09 to the data of page: C, address: 4E. (As the data is to be rewritten, press the PAUSE button of the adjusting remote commander.)
[If D09 is "7F"]
It indicates that the adjustment of step 6) has not been performed properly. Repeat from step 5).
- 9) Read the displayed data of page: 3, address: 09, and check that the numbers "F8" to "FF" and "00" to "08" are displayed alternately and consistently.
(If the data changes rapidly and the lower digits cannot be read, check that "0" and "F" are displayed alternately and consistently at the upper digit of the data displayed. If they are not, repeat from step 5).
- 10) Set data: 00 to page: 3, address: 01, and press the PAUSE button of the adjusting remote commander.
- 11) Set data: 00 to page: 1, address: 00.

Note 5: If the displayed data is "7F" no matter how many times the adjustment is performed, it indicates that IC774 is faulty.

D08 or D09	FE	FD	FC	FB	FA	F9	F8	F7	F6	F5	F4	F3	F2	F1	F0
Revised Value (Hexadecimal)	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F

3-5. VIDEO SYSTEM ADJUSTMENTS

3-5-1. RF Block Adjustments

1. Recording Current Adjustment (RS-63/64 Board)

Mode	Stop
Measurement Point	ODDch adjustment CH1: Pin ⑤ of CN771 (CL816) CH2: Pin ⑥ of CN771 (CL815) EVENch adjustment CH1: Pin ⑧ of CN771 (CL813) CH2: Pin ⑨ of CN771 (CL812)
Measuring Instrument	Oscilloscope ADD mode CH2 INV mode
Adjustment Page	C
Adjustment Address	3E, 3F
Specified Value	$A=4.0 \pm 0.1$ Vp-p

Connection: Disconnect CN771 and connect as follows.

- 1) ODDch adjustment: Connect a 180 Ω resistor between Pin ⑤ of CN771 (CL816) and Pin ⑥ of CN771 (CL815).
- 2) EVENch adjustment: Connect a 180 Ω resistor between Pin ⑧ of CN771 (CL813) and Pin ⑨ of CN771 (CL812).
180 Ω resistor (Parts code: 1-249-408-11)

Adjusting method:

- 1) Equalize the vertical range of CH1 and CH2 of the oscilloscope.
- 2) Set the oscilloscope to the ADD mode, and set CH2 to the INV mode.
- 3) Set data: 01 to page: 1, address: 00.
- 4) Set data: 0C to page: 3, address: 01, and press the PAUSE button of the adjusting remote commander.
- 5) Set data: 85 to page: 3, address: 34.
- 6) Change the data of page: C, address: 3F (ODDch adjustment) or address: 3E (EVENch adjustment), and adjust the signal voltage (A) to the specified value, press the PAUSE button on the adjustment remote commander.
- 7) Set data: 80 to page: 3, address: 34.
- 8) Set data: 00 to page: 3, address: 01, and press the PAUSE button of the adjusting remote commander.
- 9) Set data: 00 to page: 1, address: 00.

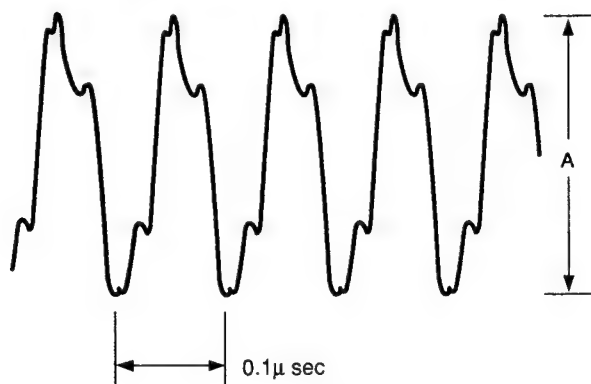


Fig. 6-3-6.

2. PLL fo Adjustment (RS-63/64 Board)

Mode	Stop
Measurement Point	Displayed data of page: 3, address: 04
Measuring Instrument	
Adjustment Page	C
Adjustment Address	3D, 3C
Specified Value	Displayed data is "FD" to "FF", "00" to "03" ("FF", "00" are center values)

Adjusting method:

- 1) Set data: 01 to page: 1, address: 00.
- 2) Set data: 05 to page: 3, address: 01, and press the PAUSE button of the adjusting remote commander.
- 3) Set data: 0E to page: 3, address: 36.
- 4) Check that the average value D04 of the displayed data of page: 3, address: 04 is "FD" to "FF", "00" or "03". If outside this range, change the data of page: C, address: 3C, and check again.
[If D04 is "80" to "FC"]
Decrease the data of page: C, address: 3C. (As the data is to be rewritten, press the PAUSE button of the adjusting remote commander.)
[If D04 is "04" to "7F"]
Increase the data of page: C, address: 3C. (As the data is to be rewritten, press the PAUSE button of the adjusting remote commander.)
- 5) Set data: 0F to page: 3, address: 36.
- 6) Check that the average value D04 of the displayed data of page: 3, address: 04 is "FD" to "FF" or "00" to "03". If outside this range, change the data of page: C, address: 3D, and check again.
[If D04 is "80" to "FC"]
Decrease the data of page: C, address: 3D. (As the data is to be rewritten, press the PAUSE button of the adjusting remote commander.)
[If D04 is "04" to "7F"]
Increase the data of page: C, address: 3D. (As the data is to be rewritten, press the PAUSE button of the adjusting remote commander.)
- 7) Set data: 00 to page: 3, address: 01, and press the PAUSE button of the adjusting remote commander.
- 8) Set data: 04 to page: 3, address: 36.
- 9) Set data: 00 to page: 1, address: 00.

3 AGC Center Level Adjustment (RS-63/64 Board)

Mode	Camera recording/playback
Subject	Arbitrary
Signal	Playback signal of recorded tape
Measurement Point	CH1: Pin ⑧ of CN775 (ERRP) CH2: Pin ⑥ of CN775 (JSWP)
Measuring Instrument	Oscilloscope Trigger source: CH2
Adjustment Page	C
Adjustment Address	44

Adjusting method:

- 1) Record camera images for two minutes on any tape.
- 2) Set data: 01 to page: 1, address: 00.
- 3) Write the following data in page: C, addresses: 40 to 44, 4B, 5A.
(To write the data, press the PAUSE button of the adjusting remote commander each time data is set.)
Page: C, address: 40, data: C0
Page: C, address: 41, data: C0
Page: C, address: 42, data: 90
Page: C, address: 43, data: 90
Page: C, address: 44, data: 60
Page: C, address: 4B, data: 8E
Page: C, address: 5A, data: 00
- 4) Playback the part recorded with the camera images.
- 5) Increase the data of page: C, address: 44, read the data D1 when the CH1 pulse is set to the whole audio and video areas.
- 6) Decrease the data of page: C, address: 44, and read the data D2 when the CH1 pulse is set to the whole audio and video areas.
- 7) Obtain the average value of D1 and D2, and take it as D3.
- 8) Set D3 to page: C, address: 44, and press the PAUSE button of the adjusting remote commander.
- 9) Set data: 0E to page: C, address: 4B, and press the PAUSE button of the adjusting remote commander.
- 10) Set data: 84 to page: C, address: 5A, and press the PAUSE button of the adjusting remote commander.
- 11) Set data: 00 to page: 1, address: 00.
- 12) After completing the adjusting, perform 5. AEQ Adjustment.

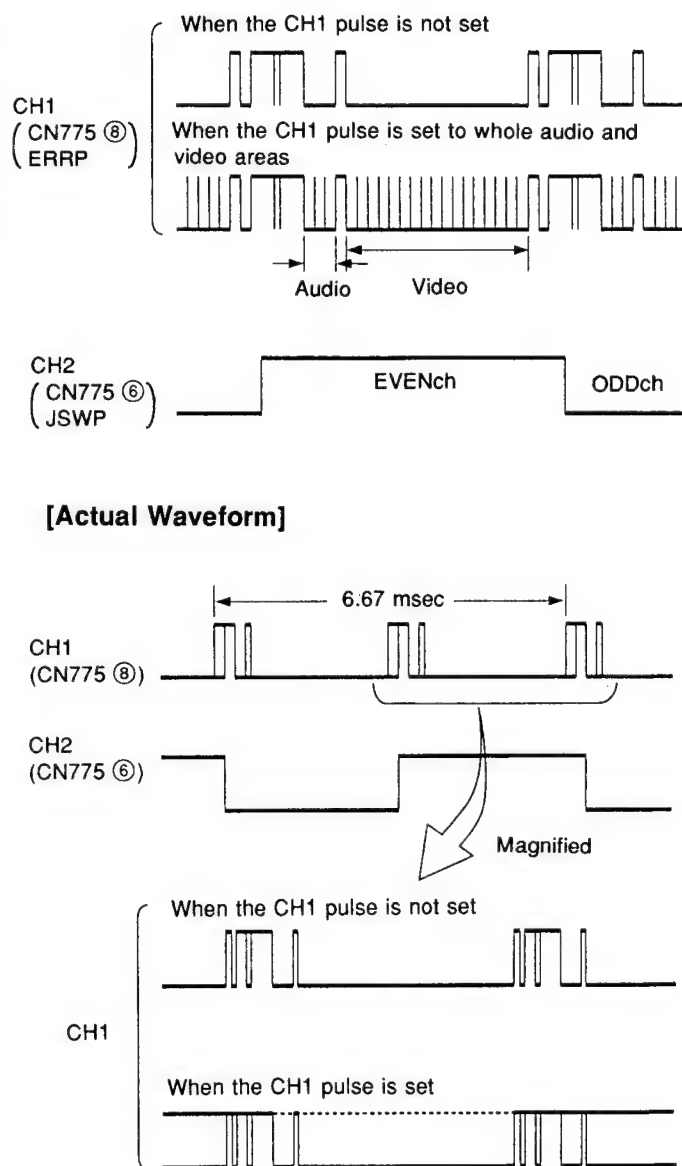


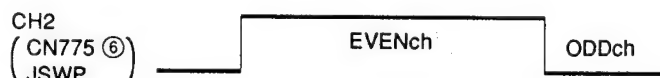
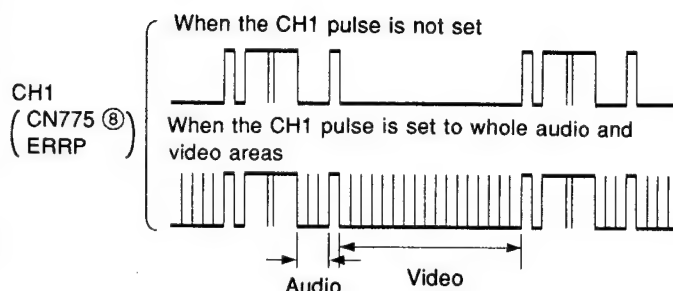
Fig. 6-3-7.

4. CLK DELAY Adjustment (RS-63/64 Board)

Mode	Camera recording/playback
Subject	Arbitrary
Signal	Playback signal of recorded tape
Measurement Point	CH1: Pin ⑧ of CN775 (ERRP) CH2: Pin ⑥ of CN775 (JSWP)
Measuring Instrument	Oscilloscope Trigger source: CH2
Adjustment Page	C
Adjustment Address	47

Adjusting method:

- 1) Record camera images for two minutes on any tape.
- 2) Set data: 01 to page: 1, address: 00.
- 3) Write the following data in page: C, addresses: 40 to 43, 47, 4B, 5A.
(To write the data, press the PAUSE button of the adjusting remote commander each time data is set.)
Page: C, address: 40, data: C0
Page: C, address: 41, data: C0
Page: C, address: 42, data: 90
Page: C, address: 43, data: 90
Page: C, address: 47, data: F0
Page: C, address: 4B, data: 8E
Page: C, address: 5A, data: 00
- 4) Playback the part recorded with the camera images.
- 5) Increase the data of page: C, address: 47, read the data D1 when the CH1 pulse is set to the whole audio and video areas.
- 6) Decrease the data of page: C, address: 47, and read the data D2 when the CH1 pulse is set to the whole audio and video areas.
- 7) Obtain the average value of D1 and D2, and take it as D3.
- 8) Set D3 to page: C, address: 47, and press the PAUSE button of the adjusting remote commander.
- 9) Set data: 0E to page: C, address: 4B, and press the PAUSE button of the adjusting remote commander.
- 10) Set data: 84 to page: C, address: 5A, and press the PAUSE button of the adjusting remote commander.
- 11) Set data: 00 to page: 1, address: 00.
- 12) After completing the adjusting, perform "5. AEQ Adjustment".



[Actual Waveform]

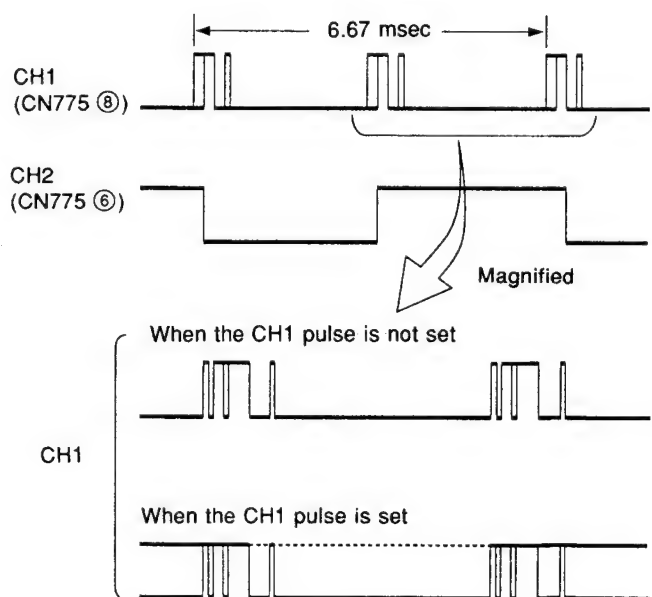


Fig. 6-3-8.

5. AEQ Adjustment (RS-63/64 Board)

Mode	Camera recording/playback
Subject	Arbitrary
Measurement Point	Pin ① of CN775 (RF MONITOR)
Measuring Instrument	Oscilloscope
Adjustment Page	C
Adjustment Address	40, 41, 42, 43, 5A

Adjusting method:

- 1) Set data: 01 to page: 1, address: 00.
- 2) Set data: 8E to page: C, address: 4B, and press the PAUSE button of the adjusting remote commander.
- 3) Write data in page: C, addresses: 40 to 43, and 5A as shown in the following table.
(To write the data, press the PAUSE button of the adjusting remote commander each time data is set.)

Address	Data
40	C0
41	C0
42	90
43	90
5A	00

- 4) Record for one minute from the tape top.
- 5) Check that the data of page: 3, address: 3A is "06" (ME tape mode).
- 6) Rewind the tape, and play back from the tape top.
- 7) When the RF output stabilizes, set data: 07 to page: 3, address: 01, and press the PAUSE button of the adjusting remote commander.
- 8) About 20 to 30 seconds after pressing the PAUSE button, check that the data of address: 02 changes from "07" to "00".
- 9) Check that the data of page: 3, address: 03 is the following value.
When "00" : Normal
When "01" : EVENch is faulty
When "02" : ODDch is faulty
When "03" : EVENch and ODDch are faulty
Perform the following procedure only when "00" is displayed.
- 10) Read the data of page: 3, address: 04 to 07, and take the values as D04, D05, D06, and D07.
- 11) Set D04 to page: D, address: 40, and press the PAUSE button of the adjusting remote commander.
- 12) Set D05 to page: D, address: 42, and press the PAUSE button of the adjusting remote commander.
- 13) Set D06 to page: D, address: 41, and press the PAUSE button of the adjusting remote commander.
- 14) Set D07 to page: D, address: 43, and press the PAUSE button of the adjusting remote commander.
- 15) Set data: 84 to page: C, address: 5A, and press the PAUSE button of the adjusting remote commander.
- 16) Set data: 0E to page: C, address: 4B, and press the PAUSE button of the adjusting remote commander.
- 17) Set data: 00 to page: 1, address: 00.

6. PLL Capture Range Adjustment (RS-63/64 Board)

Mode	Camera recording/playback
Subject	Arbitrary
Signal	Playback signal of recorded tape
Measurement Point	CH1: Pin ⑧ of CN775 (ERRP) CH2: Pin ⑥ of CN775 (JSWP)
Measuring Instrument	Oscilloscope Trigger source: CH2
Adjustment Page	C
Adjustment Address	46

Adjusting method:

- 1) Record camera images for two minutes on any tape.
- 2) Set data: 01 to page: 1, address: 00.
- 3) Write the following data in page: C, addresses: 4B and 5A.
(To write the data, press the PAUSE button of the adjusting remote commander each time data is set.)
Page: C, address: 4B, data: 8E
Page: C, address: 5A, data: 00
- 4) Playback the part recorded with the camera images.
- 5) Set data: 80 to page: C, address: 46, and press the PAUSE button of the adjusting remote commander.
- 6) Set the data of page: C, address: 46 to "60", and check that the pulse is not set at the audio area head of the ERRP waveform's ODDch of the oscilloscope (CH1).
- 7) Set the data of page: C, address: 46 to "A0", and check that the pulse is not set at the audio area head of the ERRP waveform's ODDch of the oscilloscope (CH1).
After confirming steps 6) and 7), proceed to step 12).
- 8) If the pulse is set in steps 6) and 7), increase the data of page: C, address: 46 from "80", and read the data D1 when the pulse is set at the audio area head of CH1.
- 9) Decrease the data of page: C, address: 46 from "80", and read the data D2 when the pulse is set at the audio area head of CH1.
- 10) Obtain the average value of D1 and D2, and take it as D3.
- 11) Set D3 to page: C, address: 46, and press the PAUSE button of the adjusting remote commander.
- 12) Set data: 0E to page: C, address: 4B, and press the PAUSE button of the adjusting remote commander.
- 13) Set data: 84 to page: C, address: 5A, and press the PAUSE button of the adjusting remote commander.
- 14) Set data: 00 to page: 1, address: 00.

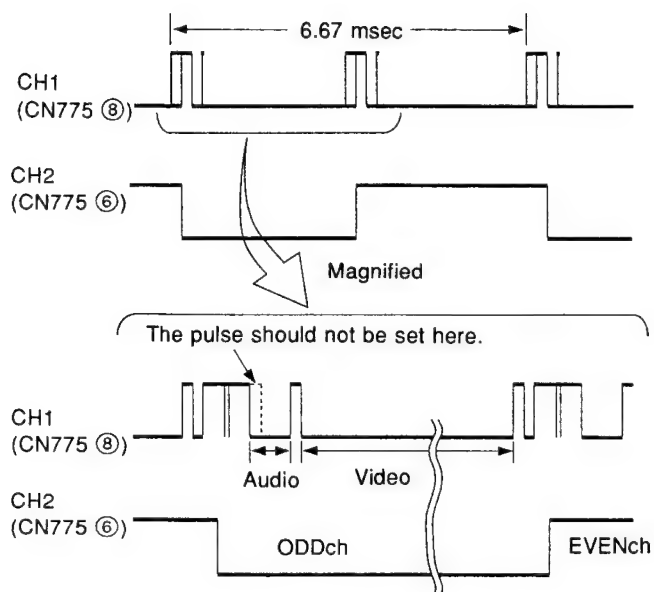


Fig. 6-3-9.

3-5-2. Base Band BLock Adjustment

1. Page D Data Initialization

Mode	Stop
Adjustment Page	D
Adjustment Address	48, 4A, 50, 51, 52, 53

Initializing method:

- 1) Set data: 01 to page: 1, address: 00.
- 2) Write data in page: D, addresses: 48, 4A, 50, 51, 52, and 53 according to the following table.
(As the data is to be rewritten, press the PAUSE button of the adjusting remote commander.)
- 3) Set data: 00 to page: 1, address: 00.

Address	Data
48	D0
4A	B3
50	3E
51	7C
52	5C
53	FF

2. AFC fo Adjustment (CB-49/52 Board)

Mode	Camera standby
Measurement Point	Pin ⑨ of IC205 (CL252) GND: CL215 (Pin ⑳ of IC204)
Measuring Instrument	Digital voltmeter
Adjusting Element	CT202
Specified Value	A=1.50 ± 0.05 Vdc

Adjusting method:

- 1) Set the DC voltage (A) to the specified value using CT202.

3. NPS fo Adjustment (CB-49/52 Board)

Mode	Stop (VTR mode)
Measurement Point	Pin ②⑥ of IC204 (CL216) GND: CL215 (Pin ②⑦ of IC204)
Measuring Instrument	Digital voltmeter
Adjusting Element	CT201
Specified Value	$f=14318182 \pm 120$ Hz (NTSC) $f=17734476 \pm 120$ Hz (PAL)

Note 1: Insert a plug in the video output terminal.

Adjusting method:

- 1) Set data: 01 page: 1, address: 00.
- 2) Set data: 02 page: D, address: 04, and press the PAUSE button of the adjusting remote commander.
- 3) Take down the data of page: D, address: 11, set data: 14, and press the PAUSE button of the adjusting remote commander. (PAL models only)
- 4) Set the oscillation frequency (f) to the specified value using CT201.
- 5) Set data: 00 to page: D, address: 04, and press the PAUSE button of the adjusting remote commander.
- 6) Set the data taken down at step 3) to page: D, address: 11, press the PAUSE button of the adjusting remote commander. (PAL models only)
- 7) Set data: 00 to page: 1, address: 00.

4. D/A V Ref Adjustment (CB-49/52 Board)

Mode	Camera standby
Measurement Point	Pin ③④ of IC290 (CL295) GND: CL291 (Pin ⑥⑨ of CN202)
Measuring Instrument	Digital voltmeter
Adjustment Page	D
Adjustment Address	50
Specified Value	$A=1.20 \pm 0.02$ Vdc

Adjusting method:

- 1) Set data: 01 to page: 1, address: 00.
- 2) Set data: 3E page: D, address: 50.
- 3) Change the data of page: D, address: 50, and set the DC voltage (A) to the specified value.
- 4) Press the PAUSE button of the adjusting remote commander.
- 5) Set data: 00 to page: 1, address: 00.

5. S-Y Output Sync Level Adjustment (CB-49/52 Board)

Mode	Camera standby
Measurement Point	Pin ⑥⑥ of CN202 (CL340) GND: CL291 (Pin ⑥⑨ of CN202)
Measuring Instrument	Oscilloscope
Adjustment Page	D
Adjustment Address	4D
Specified Value	$A=293 \pm 6$ mVp-p (NTSC) $A=307 \pm 6$ mVp-p (PAL)

Note 1: Insert a plug in the S video output terminal.

Note 2: Terminate the Y signal terminal of the S video output terminal at 75 Ω .

75 Ω resistor (Parts code: 1-247-804-11)

Adjusting method:

- 1) Set data: 01 to page: 1, address: 00.
- 2) Set data: 09 to page: 5, address: 02.
- 3) Change the data of page: D, address: 4D, and set the sync level (A) to the specified value.
- 4) Press the PAUSE button of the adjusting remote commander.
- 5) Set data: 00 to page: 5, address: 02.
- 6) Set data: 00 to page: 1, address: 00.

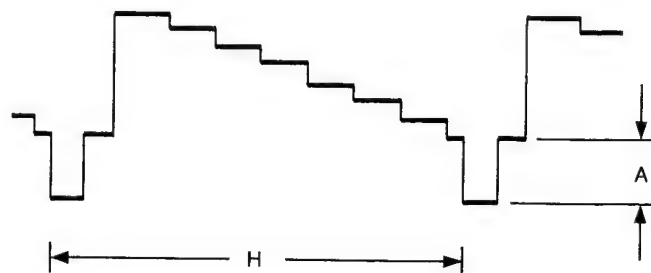


Fig. 6-3-10.

6. S-Y Output Y Level Adjustment (CB-49/52 Board)

Mode	Camera standby
Measurement Point	Pin ⑥⑥ of CN202 (CL340) GND: CL291 (Pin ⑥⑨ of CN202)
Measuring Instrument	Oscilloscope
Adjustment Page	D
Adjustment Address	4C
Specified Value	A=550 ± 10 mVp-p (NTSC) A=539 ± 10 mVp-p (PAL)

Note 1: Insert a plug in the S video output terminal.

Note 2: Terminate the Y signal terminal of the S video output terminal at 75Ω.

75 Ω resistor (Parts code: 1-247-804-11)

Adjusting method:

- 1) Set data: 01 to page: 1, address: 00.
- 2) Set data: 09 to page: 5, address: 02.
- 3) Change the data of page: D, address: 4C, and set the Y level (A) to the specified value.
- 4) Press the PAUSE button of the adjusting remote commander.
- 5) Set data: 00 to page: 5, address: 02.
- 6) Set data: 00 to page: 1, address: 00.

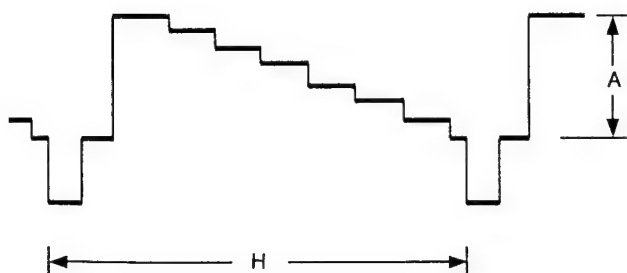


Fig. 6-3-11.

7. S-C Output Chroma Level Adjustment (CB-49/52 Board)

Mode	Camera standby
Measurement Point	Pin ⑥⑦ of CN202 (CL341) GND: CL291 (Pin ⑥⑨ of CN202)
Measuring Instrument	Oscilloscope
Adjustment Page	D
Adjustment Address	4F
Specified Value	A=500 ± 10 mVp-p (NTSC) A=487 ± 10 mVp-p (PAL)

Note 1: Insert a plug in the S video output terminal.

Note 2: Terminate the Y signal terminal of the S video output terminal at 75Ω.

75 Ω resistor (Parts code: 1-247-804-11)

Adjusting method:

- 1) Set data: 01 to page: 1, address: 00.
- 2) Set data: 09 to page: 5, address: 02.
- 3) Change the data of page: D, address: 4F, and set the yellow level (A) to the specified value.
- 4) Press the PAUSE button of the adjusting remote commander.
- 5) Set data: 00 to page: 5, address: 02.
- 6) Set data: 00 to page: 1, address: 00.

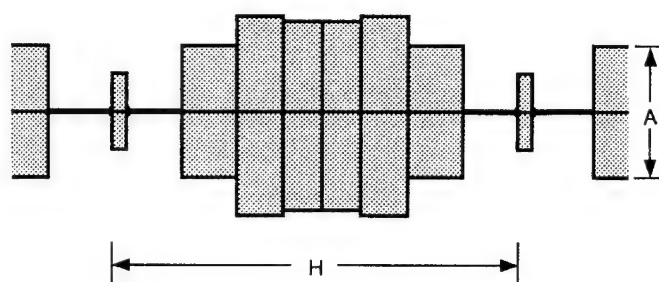


Fig. 6-3-12.

8. S-C Output Burst Level Adjustment (CB-49/52 Board)

Mode	Camera standby
Measurement Point	Pin ⑥⑦ of CN202 (CL341) GND: CL291 (Pin ⑥⑨ of CN202)
Measuring Instrument	Oscilloscope
Adjustment Page	D
Adjustment Address	49
Specified Value	A=300 ± 6 mVp-p (NTSC) A=315 ± 6 mVp-p (PAL)

Note 1: Insert a plug in the S video output terminal.

Note 2: Terminate the chroma signal terminal of the S video output terminal at 75Ω.

75Ω resistor (Parts code: 1-247-804-11)

Adjusting method:

- 1) Set data: 01 to page: 1, address: 00.
- 2) Set data: 09 to page: 5, address: 02.
- 3) Change the data of page: D, address: 49, and set the burst level (A) to the specified value.
- 4) Press the PAUSE button of the adjusting remote commander.
- 5) Set data: 00 to page: 5, address: 02.
- 6) Set data: 00 to page: 1, address: 00.

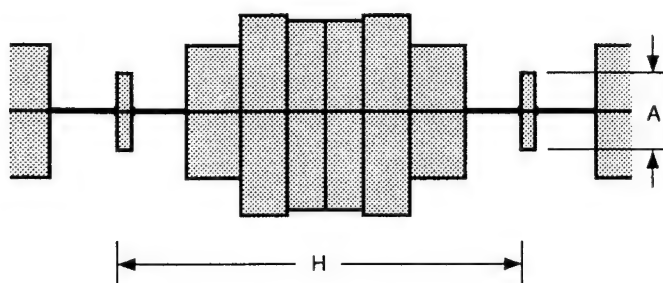


Fig. 6-3-13

9. Encoder R-Y Input Level Adjustment (CB-49/52 Board)

Mode	Camera standby
Measurement Point	Chroma signal terminal or video output terminal of S video output terminal
Measuring Instrument	Vectorscope
Adjustment Page	D
Adjustment Address	4A
Specified Value	Gain: 95 ± 2% (NTSC) Note 3 88.7 ± 2% (PAL) Note 3 Phase: 104 ± 2° (NTSC) Note 4 104 ± 2° (PAL) Note 5

Note 1: Insert a plug in the S video output terminal.

Note 2: Perform this adjustment upon completion of “S-C Output Chroma Level Adjustment” and “S-C Output Burst Level Adjustment”.

Note 3: When the burst gain is set to 40%.

Note 4: When the burst phase is set to 180°.

Note 5: When the burst phase is set to 135°.

Adjusting method:

- 1) Set data: 01 to page: 1, address: 00.
- 2) Set data: 09 to page: 5, address: 02.
- 3) Change the data of page: D, address: 4A, and set the gain and phase of the red luminance point to the specified value.
- 4) Press the PAUSE button of the adjusting remote commander.
- 5) Set data: 00 to page: 5, address: 02.
- 6) Set data: 00 to page: 1, address: 00.

Remark (Standard of the specified value)

NTSC: The RED spot will exceed about one limit on the vectorscope of NTSC (with setting up 7.5%) when the burst is adjusted to 75%.

PAL: The RED spot will become within the limit on the vectorscope of PAL (without setting up) when the burst is adjusted to 75%.

10. Composite Output Level Adjustment (CB-49/52 Board)

Mode	Camera standby
Measurement Point	Pin ⑦⑩ of CN202 (CL342) GND: CL291 (Pin ⑥⑨ of CN202)
Measuring Instrument	Oscilloscope
Adjustment Page	D
Adjustment Address	4E
Specified Value	A=843 ± 15 mVp-p (NTSC) A=846 ± 15 mVp-p (PAL)

Note 1: Insert a plug in the video output terminal.

Note 2: Terminate the video output terminal at 75Ω.
75Ω resistor (Parts code: 1-247-804-11)

Adjusting method:

- 1) Set data: 01 to page: 1, address: 00.
- 2) Set data: 09 to page: 5, address: 02.
- 3) Change the data of page: D, address: 4E, and set the composite signal level (A) to the specified value.
- 4) Press the PAUSE button of the adjusting remote commander.
- 5) Set data: 00 to page: 5, address: 02.
- 6) Set data: 00 to page: 1, address: 00.

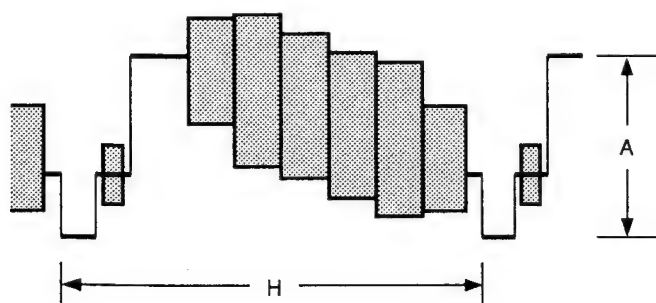


Fig. 6-3-14.

11. Encoder Sharpness Adjustment (CB-49/52 Board)

Mode	Camera standby
Measurement Point	CH1: Pin ③① of IC294 (CL323) GND: CL291 (Pin ⑥⑨ of CN202) CH2: S video output Y signal terminal
Measuring Instrument	Oscilloscope
Adjustment Page	D
Adjustment Address	53
Specified Value	A=40 ± 5 mV

Adjusting method:

- 1) Set data: 01 to page: 1, address: 00.
- 2) Set data: 09 to page: 5, address: 02.
- 3) Change the data of page: D, address: 53, and set the CH1 signal level (A) at rising from "black" to "white" of the color bar signal to the specified value.
- 4) Press the PAUSE button of the adjusting remote commander.
- 5) Set data: 00 to page: 5, address: 02.
- 6) Set data: 00 to page: 1, address: 00.

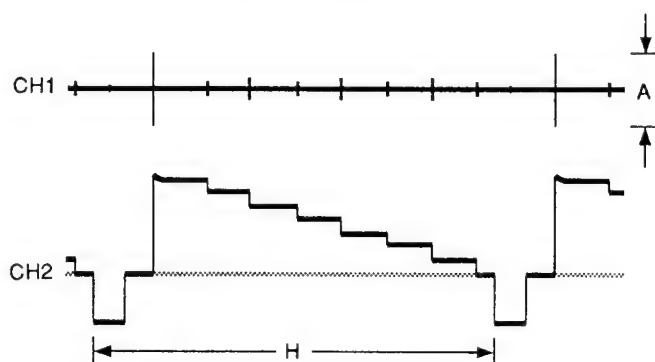


Fig. 6-3-15.

12. EVF ZEBRA Slice Level Adjustment (CB-49 Board) (DCR-VX1000/VX1000E)

Mode	Camera standby
Measurement Point	Check with viewfinder
Measuring Instrument	
Adjustment Page	D
Adjustment Address	48

Adjusting method:

- 1) Set data: 01 to page: 1, address: 00.
- 2) Set data: 05 to page: 5, address: 02.
- 3) Turn on the zebra function on the menu screen.
- 4) Set data: D0 to page: D, address: 48, and press the PAUSE button of the adjusting remote commander.
- 5) Take down the data of page: D, address: 50, set data: 46 (NTSC) or data: 49 (PAL), and press the PAUSE button of the adjusting remote commander.
- 6) Decrease the data of page: D, address: 48 by one, and press the PAUSE button of the adjusting remote commander.
- 7) Change the address to "47", and observe the viewfinder.
If the zebra pattern is not displayed:
Return to step 6).
If the zebra pattern is displayed:
Perform step 8) and onwards.
- 8) Set the data taken down at step 5) to page: D, address: 50, and press the PAUSE button of the adjusting remote commander.
- 9) Set data: 00 to page: 5, address: 02.
- 10) Set data: 00 to page: 1, address: 00.

3-5-3. JC Board Adjustment

1. 13.5 MHz Oscillation Adjustment (JC-12/14 Board Adjustment)

Mode	Camera standby
Adjustment Page	D
Adjustment Address	25

Adjusting method:

- 1) Set data: 01 to page: 1, address: 00.
- 2) Check that the data of page: D, address: 02 is "10".
- 3) Read the data of page: 2, address: 2F.
- 4) Set the data read at step 3) to page: D, address: 25.
- 5) Press the PAUSE button of the adjusting remote commander.
- 6) Set data: 00 to page: 1, address: 00.

3-6. AUDIO SYSTEM ADJUSTMENT

[Setting of Switches]

For DCR-VX1000/VX1000E, set the switches as follows, and perform the adjustments.

AUTO LOCK switch OFF
REC LEVEL button manual
CONTROL dial Set the REC LEVEL to "7."

[Connection of Audio Measuring Equipment]

Connect the audio system measuring equipment as shown in Fig. 6-3-15.

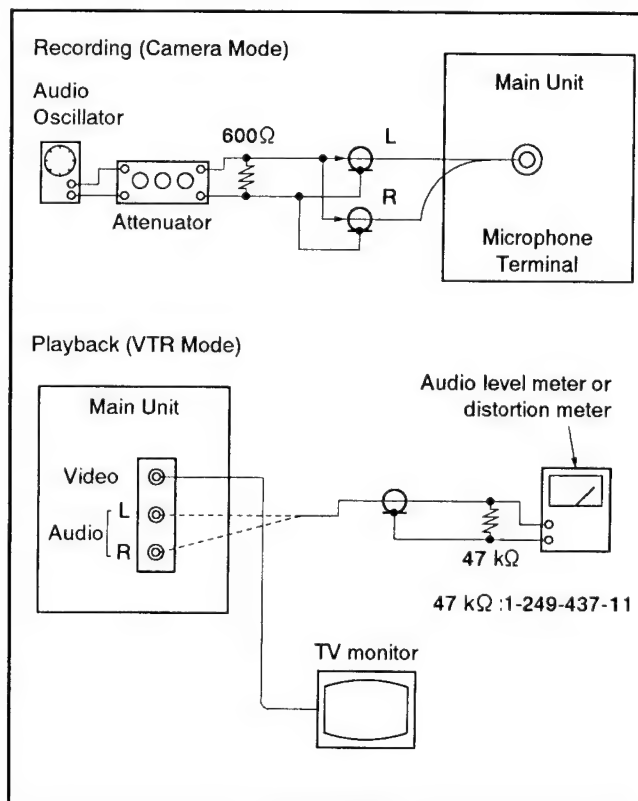


Fig 6-3-16.

1. Playback Level Check

Mode	Playback
Signal	Audio operation check tape
Measurement Point	Audio output terminal left or right
Measuring Instrument	Audio level meter and frequency counter
Specified Value	32 kHz mode: 1 kHz 2.2 ± 3 dBs 48 kHz mode: 1 kHz 2.2 ± 3 dBs 44.1 kHz mode: The 7.35 kHz signal level during EMP ON is -6 ± 2 dB against the signal level during EMP OFF.

Checking method:

- 1) Check that the playback signal level is the specified value.

2. External Microphone Input Gain Check (DCR-VX1000/VX1000E)

Mode	Camera mode recording and playback
Signal	1 kHz -56 dBs signal: External microphone input terminal left and right
Measurement Point	Audio output terminal left and right
Measuring Instrument	Audio level meter
Specified Value	$+2.2 \pm 3$ dBs

Checking method:

- 1) Input the 1 kHz -56 dBs signal in the external microphone.
- 2) Record in the camera mode.
- 3) Playback the recorded section.
- 4) Check that the distortion level is the specified value.

3. External Microphone Input Distortion Rate Check (DCR-VX1000/VX1000E)

Mode	Camera mode recording and playback
Signal	1 kHz -56 dBs signal: External microphone input terminal left and right
Measurement Point	Audio output terminal left and right
Measuring Instrument	Audio level meter
Specified Value	Below 0.4% (20 kHz LPF ON)

Checking method:

- 1) Input the 1 kHz -56 dBs signal in the external microphone.
- 2) Record in the camera mode.
- 3) Playback the recorded section.
- 4) Check that the 1 kHz signal level is the specified value.

4. External Microphone Input Noise Level Check (DCR-VX1000/VX1000E)

Mode	Camera mode recording and playback
Signal	No-signal: Insert the shorting plug in the external microphone input terminal
Measurement Point	Audio output terminal left and right
Measuring Instrument	Audio level meter
Specified Value	Below -55 dBs (IHF-A filter ON, 20 kHz LPF ON)

Checking method:

- 1) Insert the shorting plug in the external microphone.
- 2) Recording in the camera mode.
- 3) Playback the recorded section.
- 4) Check that the noise level is the specified value.

5. External Microphone Input Separation Check (DCR-VX1000/VX1000E)

Mode	Camera mode recording and playback
Signal	1 kHz -56 dBs signal: External microphone input terminal left (External microphone input terminal. Connect right to GND.)
Measurement Point	Audio output terminal right
Measuring Instrument	Audio level meter
Specified Value	Below -55 dBs (IHF-A filter ON, 20 kHz LPF ON)

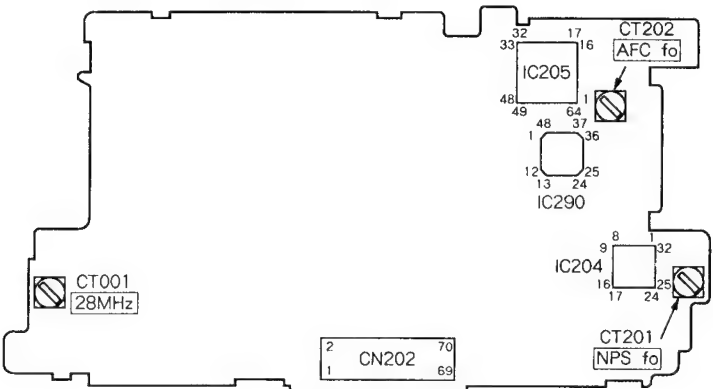
Checking method:

- 1) Input the 1 kHz -56 dBs signal in the left external microphone terminal only.
(Connect the right external microphone terminal to the GND.)
- 2) Record in the camera mode.
- 3) Playback the recorded section.
- 4) Check that the signal level of the right audio output terminal is the specified value.

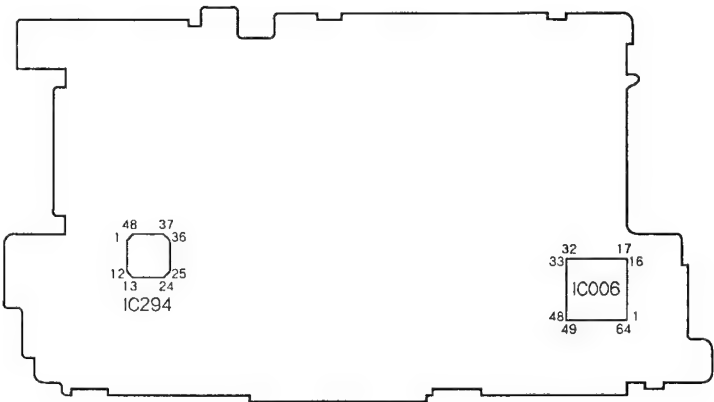
3-7. ARRANGEMENT DIAGRAM FOR ADJUSTMENT PARTS

DCR-VX1000/VX1000E

CB-49 BOARD (COMPONENT SIDE)

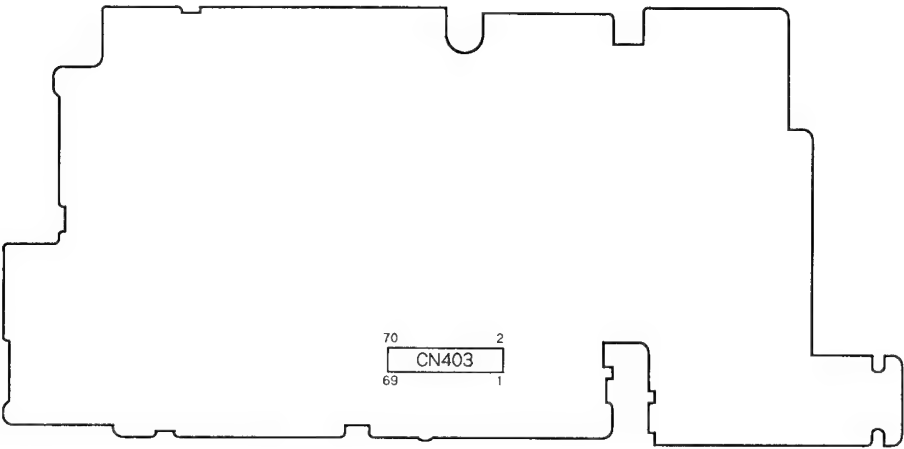


CB-49 BOARD (CONDUCTOR SIDE)



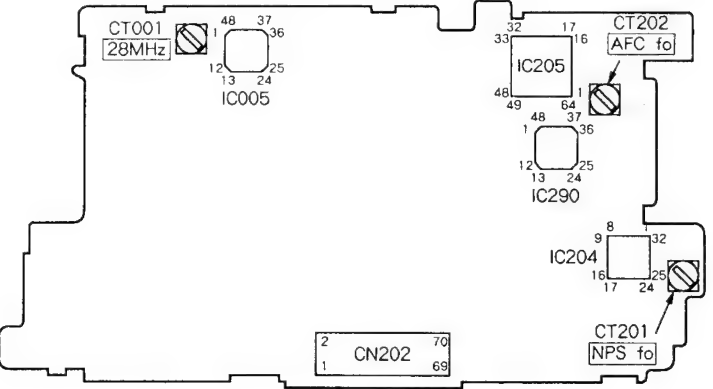
DCR-VX1000/VX1000E/VX700/VX700E

JC-12/14 BOARD (CONDUCTOR SIDE)

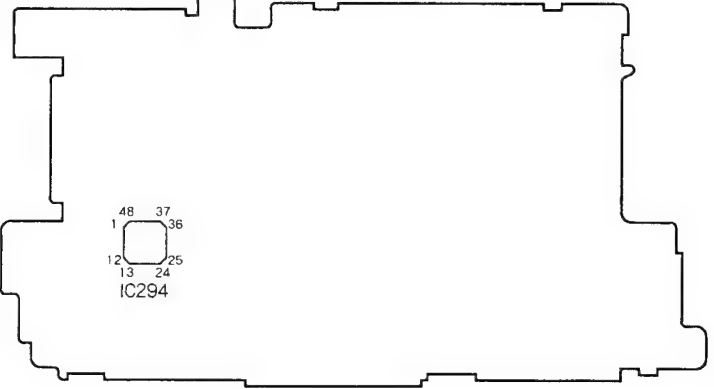


DCR-VX700/VX700E

CB-52 BOARD (COMPONENT SIDE)

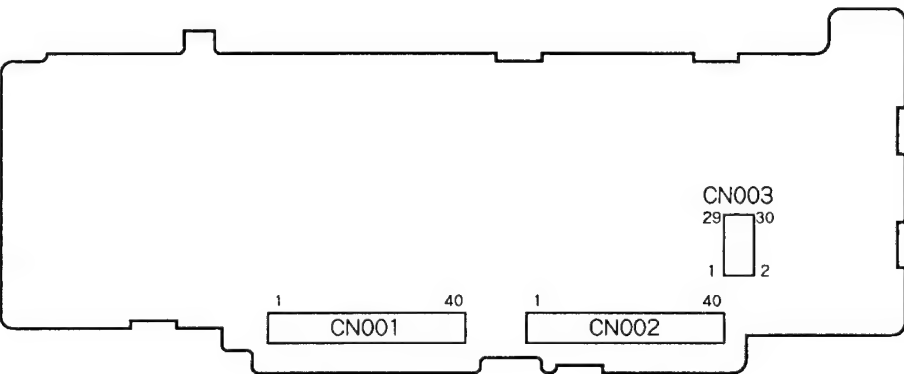


CB-52 BOARD (CONDUCTOR SIDE)



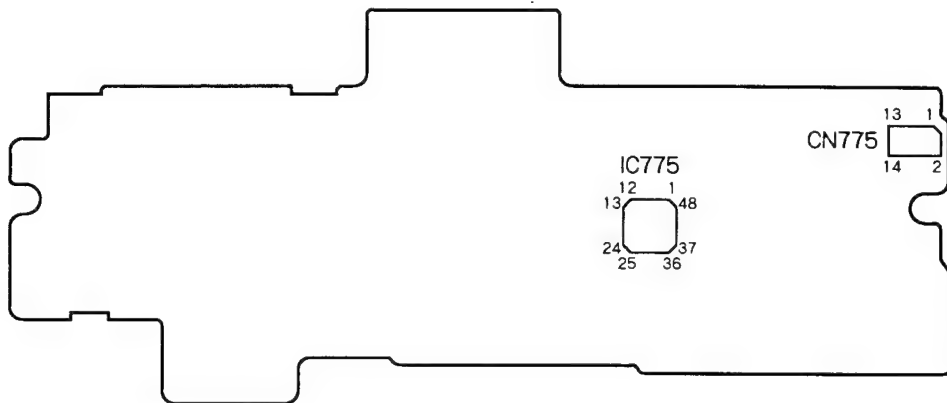
DCR-VX700/VX700E/VX1000/VX1000E

DD-75 BOARD (CONDUCTOR SIDE)

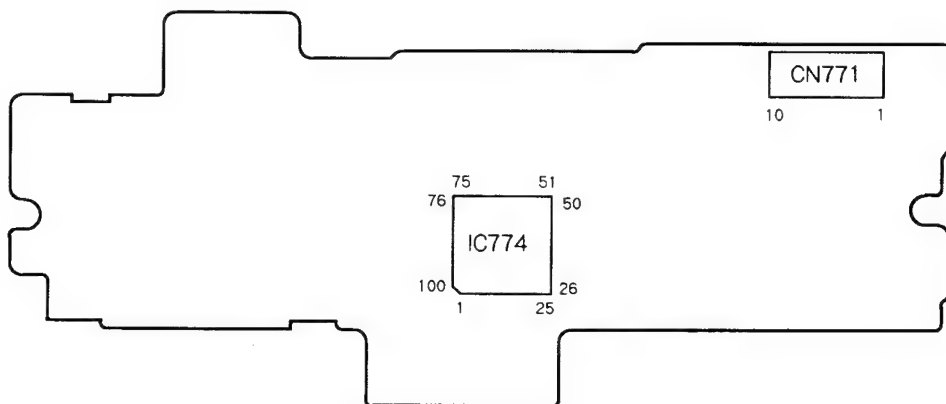


DCR-VX1000/VX1000E/VX700/VX700E

RS-63/64 BOARD (COMPONENT SIDE)



RS-63/64 BOARD (CONDUCTOR SIDE)



6-4. SERVICE MODE

4-1. ADJUSTING REMOTE COMMANDER

The adjusting remote commander is used for changing the calculation coefficient in signal processing, EVR data, etc. The adjusting remote commander performs bi-directional communication with the unit using the remote commander signal line (LANC). The resultant data of this bi-directional communication is written in the non-volatile memory.

1. Using the adjusting remote commander

- 1) Connect the adjusting remote commander to the remote terminal.
- 2) Adjust the HOLD switch of the adjusting remote commander to "HOLD" (SERVICE position).

If it has been properly connected, the LCD on the adjusting remote commander will display as shown in Fig. 6-4-1.

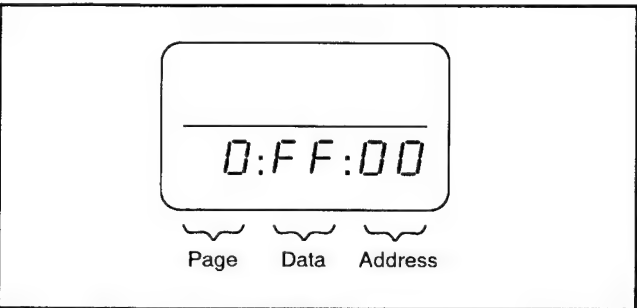


Fig. 6-4-1.

- 3) Operate the adjusting remote commander as follows.

- Changing the page

The page increases when the EDIT SEARCH+ button is pressed, and decreases when the EDIT SEARCH- button is pressed. There are altogether 16 pages, from 0 to F.

Hexadecimal notation	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
LCD Display	0	1	2	3	4	5	6	7	8	9	A	b	c	d	E	F
Decimal notation conversion value	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Table 6-4-1.

- Changing the address

The address increases when the FF (▶▶) button is pressed, and decreases when the REW (◀◀) button is pressed. There are altogether 256 addresses, from 00 to FF.

- Changing the data (Data setting)

The data increases when the PLAY (▶) button is pressed, and decreases when the STOP (■) button is pressed.

There are altogether 256 data, from 00 to FF.

- Writing the adjustment data

The PAUSE button must be pressed to write the adjustment data (F page) in the nonvolatile memory.

(The new adjustment data will not be recorded in the nonvolatile memory if this step is not performed.)

- 4) After completing all adjustments, turn off the main power supply (7.2V) once.

2. Precautions upon using the adjusting remote commander

Mishandling of the adjusting remote commander may erase the correct adjustment data at times. To prevent this, it is recommended that all adjustment data be noted down before beginning adjustments and new adjustment data after each adjustment.

4-2. DATA PROCESSING

The calculation of the DDS display and the adjusting remote commander display data (hexadecimal notation) are required for obtaining the adjustment data of some adjustment items. In this case, after converting the hexadecimal notation to decimal notation, calculate and convert the result to hexadecimal notation, and use it as the adjustment data. Table 6-4-2. indicates the hexadecimal notation-the decimal notation calculation table.

Hexadecimal notation-Decimal notation

<div> <div>② ↓</div> <div> The lower digits of the hexadecimal notation The upper digits of the hexadecimal notation </div> </div>	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
											(H)	(b)	(c)	(d)	(E)	(F)
0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
3	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
4	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
5	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
6	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111
7	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127
8	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143
9	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159
A (H)	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175
① → B (b)	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191
C (c)	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207
D (d)	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223
E (E)	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239
F (F)	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255

Note: () indicate the adjusting remote control unit display.

(Example) In the case that the DDS display and the adjusting remote control unit display are BD (bd).

As the upper digit of the hexadecimal notation is B (b), and the lower digit is D (d), the intersection "189" of the ① and ② in the above table is the decimal notation to be calculated. conversion table

Table 6-4-2.

4-3. SERVICE MODE

1. Setting the Test Mode

Page D	Address 03
--------	------------

Data	Function
00	Normal
01	Forced camera power ON
02	Forced VTR power ON
03	Forced camera+VTR power ON

- For page D, the data set is recorded in the non-volatile memory by pressing the PAUSE button of the adjusting remote commander. In this case, take note that the test mode will not be exited even when the main power is turned off (7.2 Vdc).
- After completing adjustments/repairs, be sure to return the data of this address to 00, and press the PAUSE button of the adjusting remote commander.
Set data: 00 to page: 1, address: 00.

2. Emergence Memory Address

Page C	Addresses 30 to 3B
--------	--------------------

Address	Contents
30	EMG code when first error occurs
32	Upper: MSW code when shift starts when first error occurs Lower: MSW code when first error occurs
33	Lower: MSW code to be moved when first error occurs
34	EMG code when second error occurs
36	Upper: MSW code when shift starts when second error occurs Lower: MSW code when second error occurs
37	Lower: MSW code to be moved when second error occurs
38	EMG code when last error occurs
3A	Upper: MSW code when shift starts when last error occurs Lower: MSW code when last error occurs
3B	Lower: MSW code to be moved when last error occurs

When no error occurs in the unit, data 00 is written in the above addresses (30 to 3B). When the first error occurs in the unit, the data corresponding to the error is written in the first emergency address (30 to 33). In the same way, when the second error occurs, the data corresponding to the error is written in the second emergency address (34 to 37).

Finally, when the last error occurs, the data corresponding to the error is written in the last emergency address (38 to 3B). Consequently, addresses 38 to 3B are updated each time errors occur.

Note 1: After completing adjustments, be sure to rewrite the data of addresses 30 to 3B to 00.

- Set data: 01 to page: 1, address: 00.
- Set data: 00 to page: C, address: 30, and press the PAUSE button of the adjusting remote commander.
- Set data: 00 to page: C, address: 31, and press the PAUSE button of the adjusting remote commander.
- Set data: 00 to page: C, address: 32, and press the PAUSE button of the adjusting remote commander.
- Set data: 00 to page: C, address: 33, and press the PAUSE button of the adjusting remote commander.
- Set data: 00 to page: C, address: 34, and press the PAUSE button of the adjusting remote commander.
- Set data: 00 to page: C, address: 35 and press the PAUSE button of the adjusting remote commander.
- Set data: 00 to page: C, address: 36 and press the PAUSE button of the adjusting remote commander.
- Set data: 00 to page: C, address: 37 and press the PAUSE button of the adjusting remote commander.
- Set data: 00 to page: C, address: 38, and press the PAUSE button of the adjusting remote commander.
- Set data: 00 to page: C, address: 39, and press the PAUSE button of the adjusting remote commander.
- Set data: 00 to page: C, address: 3A, and press the PAUSE button of the adjusting remote commander.
- Set data: 00 to page: C, address: 3B, and press the PAUSE button of the adjusting remote commander.
- Set data: 00 to page: 1, address: 00, and press the PAUSE button of the adjusting remote commander.

2-1. EMG Code (Emergency Code)

Codes corresponding to the errors which occur are written in addresses E4, E8, EC. The type of error indicated by the code are shown in the following table.

Code	Error Type
00	No error (Initial state)
10	Loading motor time-out during LOAD
11	Loading motor time-out during UNLOAD
22	T reel error
23	S reel error
30	Capstan FG error
40	FG error during drum start-up
42	FG error during normal drum rotation

2-2. MSW Codes

MSW when errors occur:

Information on MSW (mode SW) when errors occur

MSW when movement starts:

Information on MSW when movements starts when the mechanism position is moved (When the L motor is moved)

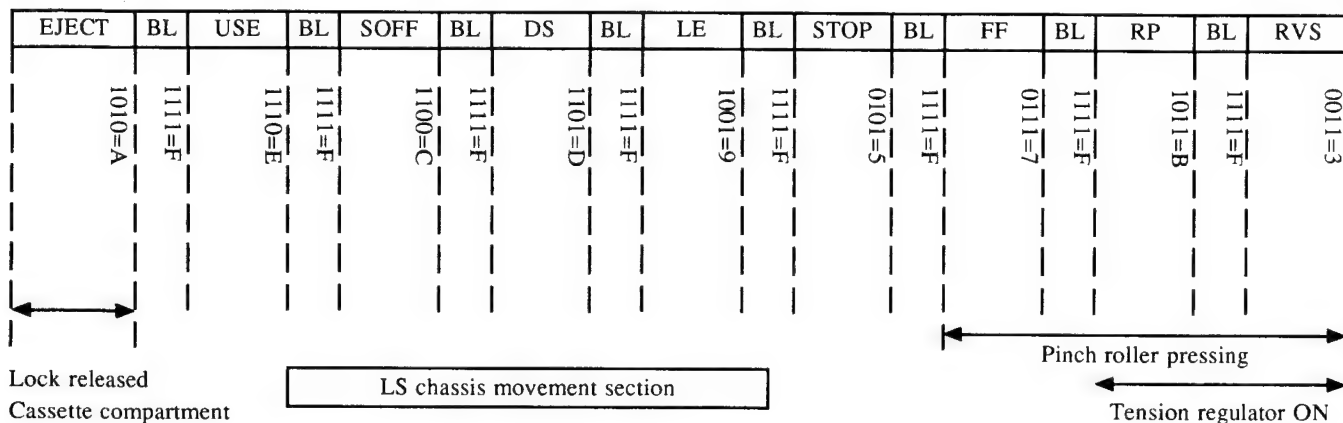
MSW of target of movement:

Information on target MSW of movement when the mechanism position is moved.

Mechanical Position

← UNLOAD

LOAD →

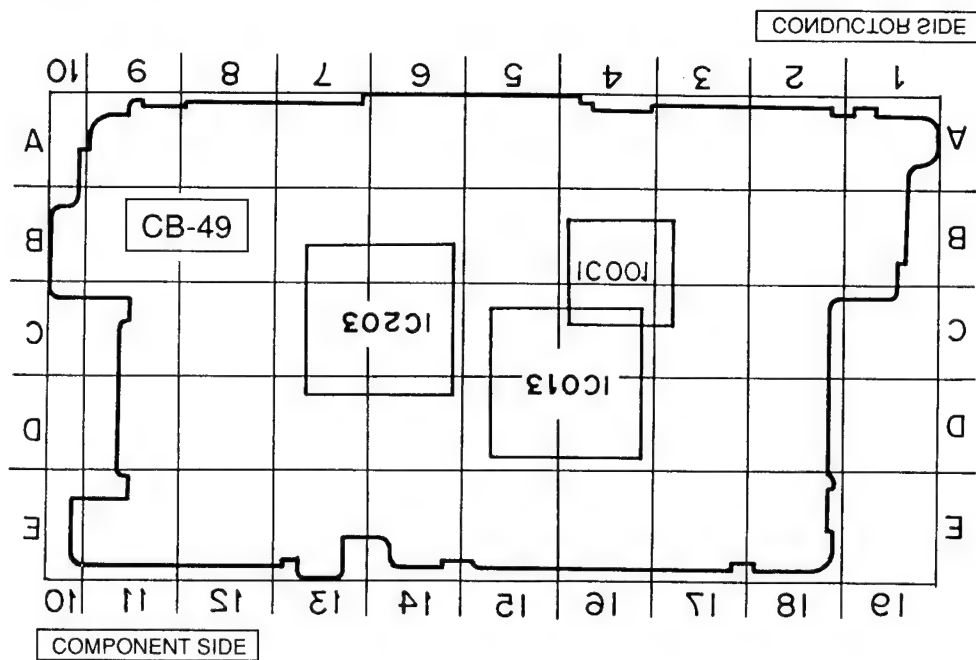


Position	Code	Contents
EJECT	A	Position at which the cassette compartment lock is released, and position at the farthest unload side mechanically at which the mechanism can move no further in the UNLOAD direction.
BL	F	BLANK code, at the boundary between codes. The mechanism will not stop at this code during operations. (Excluding LOAD/UNLOAD)
USE	E	EJECT completion position. When the cassette is ejected, the mechanism will stop at this position. Cassette IN standby. The guide will start protruding out as the mechanism moves towards the LOAD position.
SOFF	C	Code during loading. Code output while the LS chassis is moving.
DS	D	LS operations and guide loading are performed here.
LE	9	Current limiter is turned off.
STOP	5	Stop position in the loading state. The pinch roller separates, the tension regulator returns, and the brake is imposed on both reels.
FF	7	FF position. The tension regulator is half on. This position is not used except for the FF mode.
RP	B	PB, REC, Cue, Pause, FX2, FWD-SL positions. When the pinch roller is pressed, and the tension regulator is ON, the mechanism is operating at this position in modes in which normal images are shown.
RVS	3	Reverse running position. REW, REV, RX1, RX2, and RVS-SLOW are performed at this position.
NULL	0	Code not existing in the MD. When errors occur when the loading motor is not driving, this code is memorized.

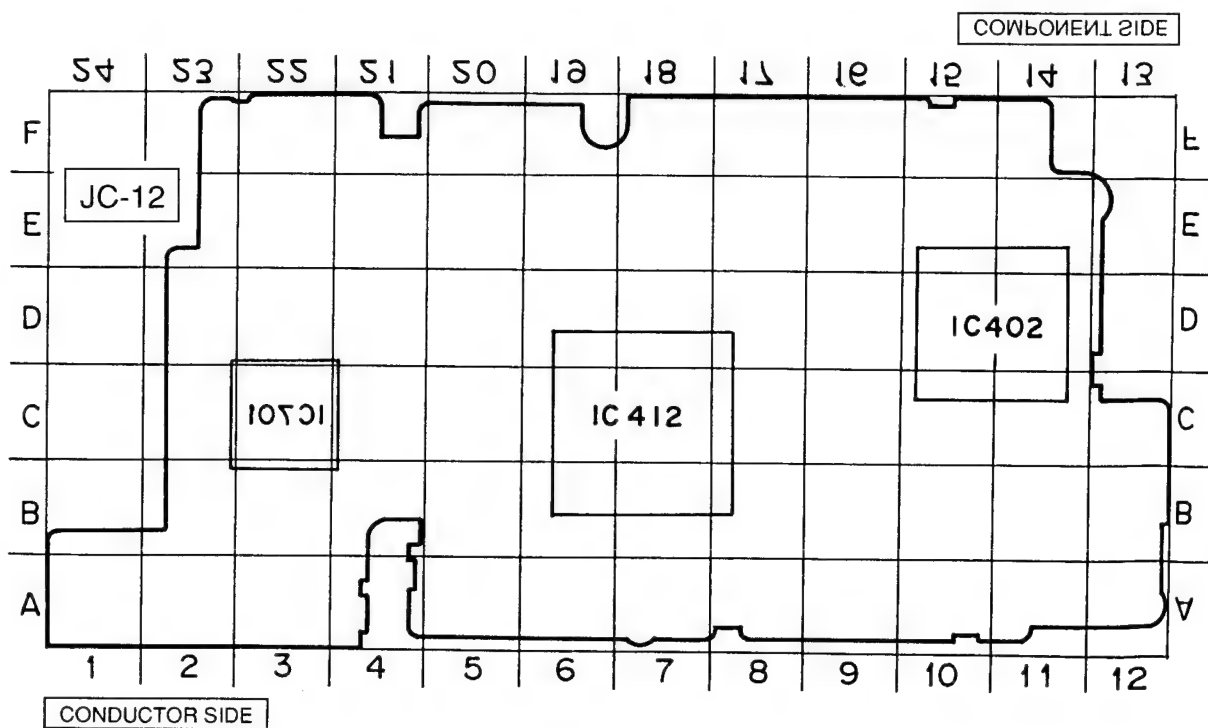
<PARTS REFERENCE SHEET>

You can find the parts position of mount locations applying to boards of a set.

Take a copy CAMERA COLOR REPRODUCTION FRAME and PARTS REFERENCE SHEET with a clear sheet for use.

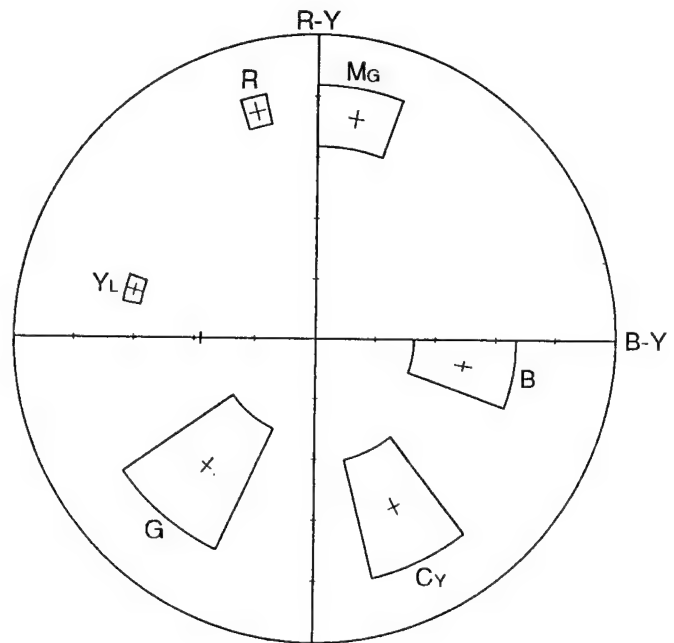


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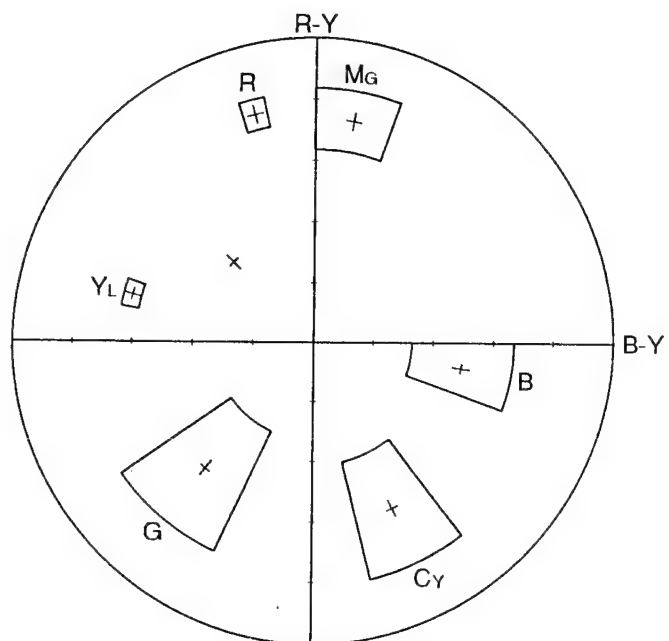
DCR-VX1000/VX1000E

FOR CAMERA COLOR REPRODUCTION ADJUSTMENT



DCR-VX1000

Take a copy CAMERA
COLOR REPRODUCTION
FRAME and Parts reference
sheets with a clear sheet for
use.



DCR-VX1000E

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DCR-VX1000
AEP Model
UK Model
DCR-VX1000E

SUPPLEMENT-3

File this supplement-3 with your Service manual.
(98-022)

Subject : • ELECTRICAL PART CHANGED

SECTION 5 REPAIR PARTS LIST

5-2. ELECTRICAL PARTS LIST

DIFFERENCE TABLE OF ELECTRICAL PART

• JC-12 BOARD (SEE SUPPLEMENT-1 (9-973-814-81) Page 4)

FORMER				NEW			
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
IC501	8-759-387-11	IC MB89098RPFV-G-136-BND		IC501	8-759-387-11	IC MB89098RPFV-G-136-BND (VX1000)	
				IC501	8-759-534-01	IC MB89098RPFV-G-166-BND (VX1000E)	

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DCR-VX1000E

SUPPLEMENT-2

File this supplement-2 with your service manual.

Subject : • ADDITION FOR BIST CHECK

3-5. VIDEO SYSTEM ADJUSTMENTS

3-5-4. BIST Check

Note 1: Use the following alignment tape.

- BIST check for NTSC (XH5-6)
Parts code: 8-967-997-71
- BIST check for PAL (XH5-6P)
Parts code: 8-967-997-76

Note 2: The "IC412 (SFY) Playback System Check" and "IC412 (SFY) Recording System Check" are only effective when the version of IC412 is new. If the version is old, IC412 may not necessarily be faulty even if the displayed data is abnormal.

Old version:

CXD2187R (8-759-338-77)

New version:

CXD2187AR (8-759-385-90) and onwards

Note 3: < >: Data of NTSC model

[]: Data of PAL model

1. Playback System Check

- 1) Set the POWER switch to VTR (or PLAYER) position.
- 2) Connect the adjusting remote commander and set the HOLD switch to HOLD (SERVICE) position.
- 3) Playback the BIST check tape.

IC774 (CHCD) Playback System Check

- 4) Select page: 3, address: 11, and set data: 01, then press the PAUSE button.
- 5) Select page: 3, address: 11, and set data: 00, then press the PAUSE button.
- 6) Select page: 3, address: 13, and set data: 01, then press the PAUSE button.

(The data will be automatically return to "00".)

- 7) When the IC774 (CHCD) PB OUT system is normal, following data will be displayed in page: 3, address: 17 and 16.

Note 4: If the following data is not displayed, repeat from step 1).

Page	Address	Data
3	17	<F6 or 6D> [94]
3	16	<9F or 26> [7B]

IC412 (SFY) Playback System Check

Note 5: If the version of IC412 is old, IC412 may not necessarily be faulty even if the displayed data: page: 4, addresses: 16 and 17 is abnormal.

- 8) Select page: 4, address: 11, and set data: 04, then press the PAUSE button.
- 9) Select page: 4, address: 11, and set data: 00, then press the PAUSE button.
- 10) Select page: 4, address: 13, and set data: 04, then press the PAUSE button.
(The data will be automatically return to "00".)
- 11) When the IC412 (SFY) AUDIO PB system is normal, following data will be displayed in page: 4, address: 16 and 17.

Page	Address	Data
4	17	<9D or 1C> [D8]
4	16	<3E or 7E> [DB]

IC644 (AUDIO) Playback System Check

- 12) Select page: 4, address: 11, and set data: FF, then press the PAUSE button.
- 13) Select page: 4, address: 11, and set data: 00, then press the PAUSE button.
- 14) Select page: 4, address: 13, and set data: 05, then press the PAUSE button.
(The data will be automatically return to "00".)
- 15) When the IC644 (AUDIO) PB OUT system is normal, following data will be displayed in page: 4, address: 14 and 15.

Page	Address	Data
4	15	<7B> [CC]
4	14	<B5> [C0]

IC408 (FDF) Playback System Check

- 16) Select page: 4, address: 11, and set data: 01, then press the PAUSE button.
- 17) Select page: 4, address: 11, and set data: 00, then press the PAUSE button.
- 18) Select page: 4, address: 13, and set data: 01, then press the PAUSE button.
(The data will be automatically return to "00".)
- 19) When the IC408 (FDF) PB IN system is normal, following data will be displayed in page: 4, address: 18 and 19.

Page	Address	Data
4	19	<D1> [C9]
4	18	<61> [A7]

- 20) When the IC408 (FDF) PB OUT system is normal, following data will be displayed in page: 4, address: 1A and 1B.

Page	Address	Data
4	1B	<F2> [C1]
4	1A	<0C> [70]

IC403 (COMP) Playback System Check

- 21) Select page: 4, address: 11, and set data: 01, then press the PAUSE button.
- 22) Select page: 4, address: 13, and set data: 01, then press the PAUSE button.
(The data will be automatically return to "00".)
- 23) Select page: 4, address: 11, and set data: 00, then press the PAUSE button.
- 24) When the IC403 (COMP) PB IN system is normal, following data will be displayed in page: 4, address: 16 and 17.

Page	Address	Data
4	17	<F2> [C1]
4	16	<0C> [70]

- 25) When the IC403 (COMP) PB OUT system is normal, following data will be displayed in page: 4, address: 14 and 15.

Page	Address	Data
4	15	<34> [A0]
4	14	<74> [C2]

IC402 (BLK) Playback System Check

- 26) Select page: 4, address: 11, and set data: 02, then press the PAUSE button.
- 27) Select page: 4, address: 13, and set data: 03, then press the PAUSE button.
(The data will be automatically return to "00".)
- 28) Select page: 4, address: 11, and set data: 00, then press the PAUSE button.
- 29) When the IC402 (BLK) PB IN system is normal, following data will be displayed in page: 4, address: 14 and 15.

Page	Address	Data
4	15	<34> [A0]
4	14	<74> [C2]

- 30) When the IC402 (BLK) PB OUT system is normal, following data will be displayed in page: 4, address: 16 and 17.

Page	Address	Data
4	17	<BF> [D9]
4	16	<85> [FF]

- 31) Perform "Recording System Check".

2. Recording System Check

Note 6: Perform "Playback System Check" before this check.

Note 7: < >: Data of NTSC model

[]: Data of PAL model

- 1) Playback the BIST check tape.
- 2) Select page: 4, address: 10, and set data: 02, then press the PAUSE button.
- 3) Select page: 4, address: 10, and set data: 06, then press the PAUSE button.
- 4) Select page: 4, address: 0C, and set data: 02, then press the PAUSE button.
- 5) Select page: 4, address: 0B, and set data: 01, then press the PAUSE button.
- 6) Eject the BIST check tape and insert a tape for recording in place of the tape.
- 7) While keep the HOLD switch at ON (SERVICE) position, set the POWER switch to CAMERA position.
- 8) Set to the camera recording mode.

IC402 (BLK) Recording System Check

- 9) Select page: 4, address: 11, and set data: 02, then press the PAUSE button.
- 10) Select page: 4, address: 13, and set data: 03, then press the PAUSE button.
(The data will be automatically return to "00".)
- 11) Select page: 4, address: 11, and set data: 00, then press the PAUSE button.
- 12) When the IC402 (BLK) REC OUT system is normal, following data will be displayed in page: 4, address: 14 and 15.

Note 8: Either the EVEN or ODD data is displayed according to the timing.

Page	Address	Data	
		EVEN	ODD
4	15	<D1> [32]	<64> [41]
4	14	<35> [AD]	<F0> [7F]

IC403 (COMP) Recording System Check

- 13) Select page: 4, address: 11, and set data: 01, then press the PAUSE button.
- 14) Select page: 4, address: 13, and set data: 01, then press the PAUSE button.
(The data will be automatically return to "00".)
- 15) Select page: 4, address: 11, and set data: 00, then press the PAUSE button.
- 16) When the IC403 (COMP) REC IN system is normal, following data will be displayed in page: 4, address: 14 and 15.

Page	Address	Data	
		EVEN	ODD
4	15	<2A> [F5]	<B9> [AD]
4	14	<BC> [63]	<2C> [4B]

- 17) When the IC403 (COMP) REC OUT system is normal, following data will be displayed in page: 4, address: 16 and 17.

Page	Address	Data	
		EVEN	ODD
4	17	<C7> [56]	<10> [C7]
4	16	<BE> [3F]	<CE> [90]

IC408 (FDF) Recording System Check

- 18) Select page: 4, address: 11, and set data: 01, then press the PAUSE button.
- 19) Select page: 4, address: 11, and set data: 00, then press the PAUSE button.
- 20) Select page: 4, address: 13, and set data: 01, then press the PAUSE button.
(The data will be automatically return to "00".)
- 21) When the IC408 (FDF) REC IN system is normal, following data will be displayed in page: 4, address: 1A and 1B.

Page	Address	Data	
		EVEN	ODD
4	1B	<C7> [56]	<10> [C7]
4	1A	<BE> [3F]	<CE> [90]

- 22) When the IC408 (FDF) REC OUT system is normal, following data will be displayed in page: 4, address: 18 and 19.

Page	Address	Data	
		EVEN	ODD
4	19	<B3> [94]	<C4> [03]
4	18	<13> [59]	<F7> [B7]

IC412 (SFY) Recording System Check

Note 9: If the version of IC412 is old, IC412 may not necessarily be faulty even if the displayed data: page: 4, addresses: 15 to 17 is abnormal.

- 23) Select page: 4, address: 1C, and set data: FF, then press the PAUSE button.
- 24) Select page: 3, address: 01, and set data: 0D, then press the PAUSE button.
- 25) Select page: 4, address: 11, and set data: 04, then press the PAUSE button.
- 26) Select page: 4, address: 11, and set data: 00, then press the PAUSE button.
- 27) Select page: 4, address: 13, and set data: 04, then press the PAUSE button.
(The data will be automatically return to "00".)
- 28) When the IC412 (SFY) REC OUT system is normal, following data will be displayed in page: 4, address: 14 and 15.

Page	Address	Data	
		EVEN	ODD
4	15	<C4> [4D]	<E1> [CE]
4	14	<90> [8E]	<A2> [ED]

- 29) When the IC412 (SFY) AUDIO IN system is normal, following data will be displayed in page: 4, address: 16 and 17.

Page	Address	Data	
		EVEN	ODD
4	17	<0F> [BF]	<0F> [BF]
4	16	<35> [59]	<35> [59]

IC774 (CHCD) Recording System Check

- 30) Select page: 3, address: 35, and set data: 79, then press the PAUSE button.
- 31) Select page: 4, address: 11, and set data: 04, then press the PAUSE button.
- 32) Select page: 3, address: 11, and set data: 01, then press the PAUSE button.
- 33) Select page: 3, address: 11, and set data: 00, then press the PAUSE button.
- 34) Select page: 3, address: 13, and set data: 01, then press the PAUSE button.
(The data will be automatically return to "00".)
- 35) When the IC774 (CHCD) RETURN OUT system is normal, following data will be displayed in page: 3, address: 16 and 17.

Page	Address	Data	
		EVEN	ODD
3	17	<67> [CF]	<21> [1F]
3	16	<32> [70]	<ED> [DE]

- 36) Turn off the power.

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SUPPLEMENT-2

File this supplement-2 with your service manual.

Subject : • ADDITION FOR BIST CHECK

3-5. VIDEO SYSTEM ADJUSTMENTS

3-5-4. BIST Check

Note 1: Use the following alignment tape.

- BIST check for NTSC (XH5-6)
Parts code: 8-967-997-71
- BIST check for PAL (XH5-6P)
Parts code: 8-967-997-76

Note 2: The "IC412 (SFY) Playback System Check" and "IC412 (SFY) Recording System Check" are only effective when the version of IC412 is new. If the version is old, IC412 may not necessarily be faulty even if the displayed data is abnormal.

Old version:

CXD2187R (8-759-338-77)

New version:

CXD2187AR (8-759-385-90) and onwards

Note 3: < >: Data of NTSC model

[]: Data of PAL model

1. Playback System Check

- 1) Set the POWER switch to VTR (or PLAYER) position.
- 2) Connect the adjusting remote commander and set the HOLD switch to HOLD (SERVICE) position.
- 3) Playback the BIST check tape.

IC774 (CHCD) Playback System Check

- 4) Select page: 3, address: 11, and set data: 01, then press the PAUSE button.
- 5) Select page: 3, address: 11, and set data: 00, then press the PAUSE button.
- 6) Select page: 3, address: 13, and set data: 01, then press the PAUSE button.

(The data will be automatically return to "00".)

- 7) When the IC774 (CHCD) PB OUT system is normal, following data will be displayed in page: 3, address: 17 and 16.

Note 4: If the following data is not displayed, repeat from step 1).

Page	Address	Data
3	17	<F6 or 6D> [94]
3	16	<9F or 26> [7B]

IC412 (SFY) Playback System Check

Note 5: If the version of IC412 is old, IC412 may not necessarily be faulty even if the displayed data: page: 4, addresses: 16 and 17 is abnormal.

- 8) Select page: 4, address: 11, and set data: 04, then press the PAUSE button.
- 9) Select page: 4, address: 11, and set data: 00, then press the PAUSE button.
- 10) Select page: 4, address: 13, and set data: 04, then press the PAUSE button.
(The data will be automatically return to "00".)
- 11) When the IC412 (SFY) AUDIO PB system is normal, following data will be displayed in page: 4, address: 16 and 17.

Page	Address	Data
4	17	<9D or 1C> [D8]
4	16	<3E or 7E> [DB]

IC644 (AUDIO) Playback System Check

- 12) Select page: 4, address: 11, and set data: FF, then press the PAUSE button.
- 13) Select page: 4, address: 11, and set data: 00, then press the PAUSE button.
- 14) Select page: 4, address: 13, and set data: 05, then press the PAUSE button.
(The data will be automatically return to "00".)
- 15) When the IC644 (AUDIO) PB OUT system is normal, following data will be displayed in page: 4, address: 14 and 15.

Page	Address	Data
4	15	<7B> [CC]
4	14	<B5> [C0]

IC408 (FDF) Playback System Check

- 16) Select page: 4, address: 11, and set data: 01, then press the PAUSE button.
- 17) Select page: 4, address: 11, and set data: 00, then press the PAUSE button.
- 18) Select page: 4, address: 13, and set data: 01, then press the PAUSE button.
(The data will be automatically return to "00".)
- 19) When the IC408 (FDF) PB IN system is normal, following data will be displayed in page: 4, address: 18 and 19.

Page	Address	Data
4	19	<D1> [C9]
4	18	<61> [A7]

- 20) When the IC408 (FDF) PB OUT system is normal, following data will be displayed in page: 4, address: 1A and 1B.

Page	Address	Data
4	1B	<F2> [C1]
4	1A	<0C> [70]

IC403 (COMP) Playback System Check

- 21) Select page: 4, address: 11, and set data: 01, then press the PAUSE button.
- 22) Select page: 4, address: 13, and set data: 01, then press the PAUSE button.
(The data will be automatically return to "00".)
- 23) Select page: 4, address: 11, and set data: 00, then press the PAUSE button.
- 24) When the IC403 (COMP) PB IN system is normal, following data will be displayed in page: 4, address: 16 and 17.

Page	Address	Data
4	17	<F2> [C1]
4	16	<0C> [70]

- 25) When the IC403 (COMP) PB OUT system is normal, following data will be displayed in page: 4, address: 14 and 15.

Page	Address	Data
4	15	<34> [A0]
4	14	<74> [C2]

IC402 (BLK) Playback System Check

- 26) Select page: 4, address: 11, and set data: 02, then press the PAUSE button.
- 27) Select page: 4, address: 13, and set data: 03, then press the PAUSE button.
(The data will be automatically return to "00".)
- 28) Select page: 4, address: 11, and set data: 00, then press the PAUSE button.
- 29) When the IC402 (BLK) PB IN system is normal, following data will be displayed in page: 4, address: 14 and 15.

Page	Address	Data
4	15	<34> [A0]
4	14	<74> [C2]

- 30) When the IC402 (BLK) PB OUT system is normal, following data will be displayed in page: 4, address: 16 and 17.

Page	Address	Data
4	17	<BF> [D9]
4	16	<85> [FF]

- 31) Perform "Recording System Check".

2. Recording System Check

Note 6: Perform "Playback System Check" before this check.

Note 7: < >: Data of NTSC model

[]: Data of PAL model

- 1) Playback the BIST check tape.
- 2) Select page: 4, address: 10, and set data: 02, then press the PAUSE button.
- 3) Select page: 4, address: 10, and set data: 06, then press the PAUSE button.
- 4) Select page: 4, address: 0C, and set data: 02, then press the PAUSE button.
- 5) Select page: 4, address: 0B, and set data: 01, then press the PAUSE button.
- 6) Eject the BIST check tape and insert a tape for recording in place of the tape.
- 7) While keep the HOLD switch at ON (SERVICE) position, set the POWER switch to CAMERA position.
- 8) Set to the camera recording mode.

IC402 (BLK) Recording System Check

- 9) Select page: 4, address: 11, and set data: 02, then press the PAUSE button.
- 10) Select page: 4, address: 13, and set data: 03, then press the PAUSE button.
(The data will be automatically return to "00".)
- 11) Select page: 4, address: 11, and set data: 00, then press the PAUSE button.
- 12) When the IC402 (BLK) REC OUT system is normal, following data will be displayed in page: 4, address: 14 and 15.

Note 8: Either the EVEN or ODD data is displayed according to the timing.

Page	Address	Data	
		EVEN	ODD
4	15	<D1> [32]	<64> [41]
4	14	<35> [AD]	<F0> [7F]

IC403 (COMP) Recording System Check

- 13) Select page: 4, address: 11, and set data: 01, then press the PAUSE button.
- 14) Select page: 4, address: 13, and set data: 01, then press the PAUSE button.
(The data will be automatically return to "00".)
- 15) Select page: 4, address: 11, and set data: 00, then press the PAUSE button.
- 16) When the IC403 (COMP) REC IN system is normal, following data will be displayed in page: 4, address: 14 and 15.

Page	Address	Data	
		EVEN	ODD
4	15	<2A> [F5]	<B9> [AD]
4	14	<BC> [63]	<2C> [4B]

- 17) When the IC403 (COMP) REC OUT system is normal, following data will be displayed in page: 4, address: 16 and 17.

Page	Address	Data	
		EVEN	ODD
4	17	<C7> [56]	<10> [C7]
4	16	<BE> [3F]	<CE> [90]

IC408 (FDF) Recording System Check

- 18) Select page: 4, address: 11, and set data: 01, then press the PAUSE button.
- 19) Select page: 4, address: 11, and set data: 00, then press the PAUSE button.
- 20) Select page: 4, address: 13, and set data: 01, then press the PAUSE button.
(The data will be automatically return to "00".)
- 21) When the IC408 (FDF) REC IN system is normal, following data will be displayed in page: 4, address: 1A and 1B.

Page	Address	Data	
		EVEN	ODD
4	1B	<C7> [56]	<10> [C7]
4	1A	<BE> [3F]	<CE> [90]

- 22) When the IC408 (FDF) REC OUT system is normal, following data will be displayed in page: 4, address: 18 and 19.

Page	Address	Data	
		EVEN	ODD
4	19	<B3> [94]	<C4> [03]
4	18	<13> [59]	<F7> [B7]

IC412 (SFY) Recording System Check

Note 9: If the version of IC412 is old, IC412 may not necessarily be faulty even if the displayed data: page: 4, addresses: 15 to 17 is abnormal.

- 23) Select page: 4, address: 1C, and set data: FF, then press the PAUSE button.
- 24) Select page: 3, address: 01, and set data: 0D, then press the PAUSE button.
- 25) Select page: 4, address: 11, and set data: 04, then press the PAUSE button.
- 26) Select page: 4, address: 11, and set data: 00, then press the PAUSE button.
- 27) Select page: 4, address: 13, and set data: 04, then press the PAUSE button.
(The data will be automatically return to "00".)
- 28) When the IC412 (SFY) REC OUT system is normal, following data will be displayed in page: 4, address: 14 and 15.

Page	Address	Data	
		EVEN	ODD
4	15	<C4> [4D]	<E1> [CE]
4	14	<90> [8E]	<A2> [ED]

- 29) When the IC412 (SFY) AUDIO IN system is normal, following data will be displayed in page: 4, address: 16 and 17.

Page	Address	Data	
		EVEN	ODD
4	17	<0F> [BF]	<0F> [BF]
4	16	<35> [59]	<35> [59]

IC774 (CHCD) Recording System Check

- 30) Select page: 3, address: 35, and set data: 79, then press the PAUSE button.
- 31) Select page: 4, address: 11, and set data: 04, then press the PAUSE button.
- 32) Select page: 3, address: 11, and set data: 01, then press the PAUSE button.
- 33) Select page: 3, address: 11, and set data: 00, then press the PAUSE button.
- 34) Select page: 3, address: 13, and set data: 01, then press the PAUSE button.
(The data will be automatically return to "00".)
- 35) When the IC774 (CHCD) RETURN OUT system is normal, following data will be displayed in page: 3, address: 16 and 17.

Page	Address	Data	
		EVEN	ODD
3	17	<67> [CF]	<21> [1F]
3	16	<32> [70]	<ED> [DE]

- 36) Turn off the power.

DCR-VX1000/VX1000E

RMT-803

SONY®

SERVICE MANUAL

US Model
Canadian Model
DCR-VX1000
AEP Model
UK Model
DCR-VX1000E

SUPPLEMENT-1

File this supplement-1 with your service manual.

(97-001)

<p>Subject : • MECHANICAL PARTS CHANGED • ELECTRICAL PARTS CHANGED</p>
--

• MAIN CHANGES

- The cabinet (L) assembly has changed.
- The mechanical service parts of main board have changed.
- The electrical service parts of DD-75, JC-12, RS-63, VF-74 Boards have changed.

PARTS CHANGED





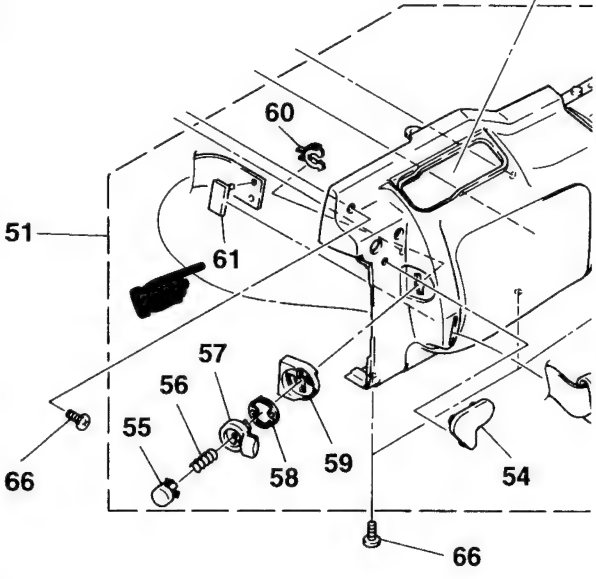
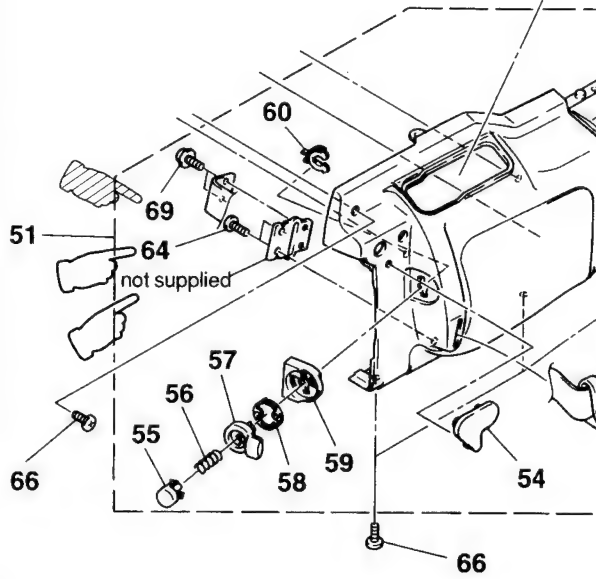
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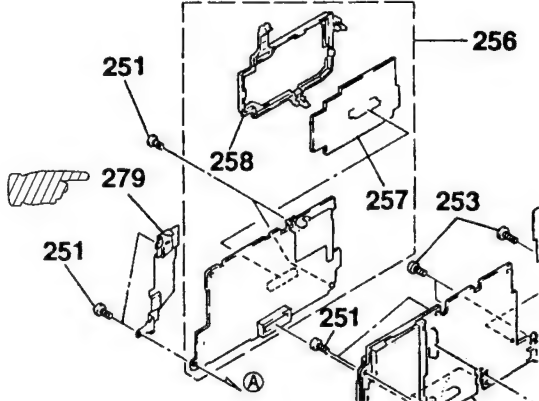
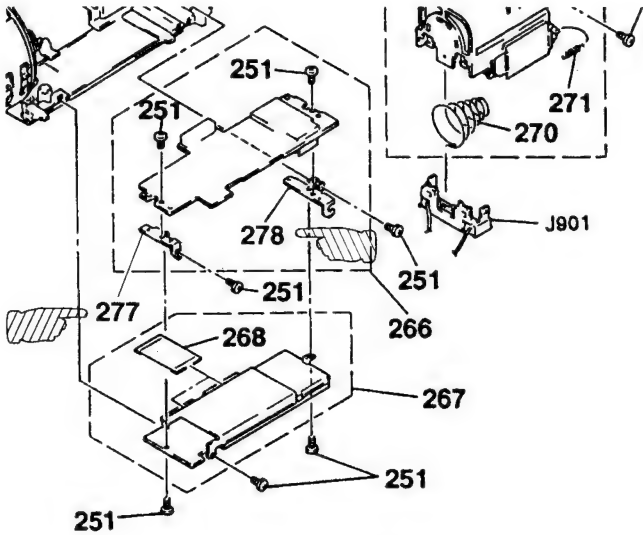
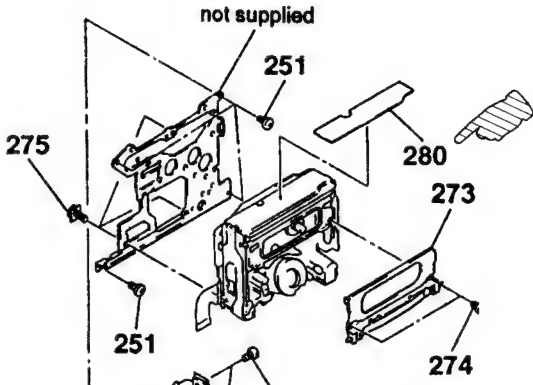
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Page	FORMER				NEW			
5-2	Ref. No.	Parts No.	Description	Remark	Ref. No.	Parts No.	Description	Remark
	61	3-942-895-01	STOPPER, BELT 		69	3-679-362-11	SCREW 	
								

 : indicated changed portion

Page	FORMER				NEW			
	Ref. No.	Parts No.	Description	Remark	Ref. No.	Parts No.	Description	Remark
			not supplied		277	3-963-934-01	PLATE (FRONT), RS-DD	
			not supplied		278	3-963-935-01	PLATE (REAR), RS-DD	
			not supplied		279	3-964-008-01	HEAT SINK, CB	
			not supplied		280	3-967-532-01	LABEL (E), CASSETTE CAUTION (VX1000)	
5-6								
								

DCR-VX1000/VX1000E

• DIFFERENCE TABLE OF ELECTRICAL PARTS • DD-75 BOARD

Ref. No.	Parts No.	Description	Remark	Former	New	Location	
						Printed wiring board	Schematic diagram
*	A-7066-434-A	DD-75 BOARD, COMPLETE (VX1000) *****					
*	A-7066-612-A	DD-75 (P) BOARD, COMPLETE (VX1000E) *****					
		(Ref. No. 9,000 Series)					
C038	1-104-915-11	TANTAL, CHIP	2.2uF 20% 20V	○	X	C-5	F-27
C038	1-113-986-11	TANTAL, CHIP	2.2uF 20% 25V	X	○	C-5	F-27

• JC-12 BOARD

Ref. No.	Parts No.	Description	Remark	Former	New	Location	
						Printed wiring board	Schematic diagram
*	A-7066-611-A	JC-12P BOARD, COMPLETE (VX1000E) *****					
*	A-7066-693-A	JC-12 BOARD, COMPLETE (VX1000) *****					
		(Ref. No. 3,000 Series)					
C502	1-104-851-11	TANTAL, CHIP	10uF 20% 10V	○	X	C-19	JC-12 BOARD (6/7) K-7
C502	1-113-994-11	TANTAL, CHIP	6.8uF 20% 16V	X	○	C-19	K-7
IC412	8-759-338-77	IC CXD2187R		○	X	C-7	JC-12 BOARD (3/7) I-9
IC412	8-759-338-77	IC CXD2187R (VX1000)		X	○	C-7	I-9
IC412	8-759-385-90	IC CXD2187AR (VX1000E)		X	○	C-7	I-9
IC501	8-759-366-27	IC MB89098RPFV-G-133-BND		○	X	D-20	JC-12 BOARD (6/7) F-12
IC501	8-759-387-11	IC MB89098RPFV-G-136-BND		X	○	D-20	F-12
IC504	8-759-357-70	IC HD6433837TA39X (VX1000)		○	X	E-22	JC-12 BOARD (7/7) E-9
IC504	8-759-387-05	IC HD6433837TA62X (VX1000)		X	○	E-22	E-9
IC504	8-759-357-71	IC HD6433837TA40X (VX1000E)		○	X	E-22	E-9
IC504	8-759-387-06	IC HD6433837TA63X (VX1000E)		X	○	E-22	E-9

• RS-63 BOARD

Ref. No.	Parts No.	Description	Remark	Former	New	Location	
						Printed wiring board	Schematic diagram
*	A-7066-432-A	RS-63 BOARD, COMPLETE *****					
		(Ref. No. 4,000 Series)					
C939	1-164-360-11	CERAMIC CHIP	0.1uF 16V	○	X	C-9	RS-63 BOARD (2/2) E-16
C939	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	X	○	C-9	E-16

• VF-74 BOARD

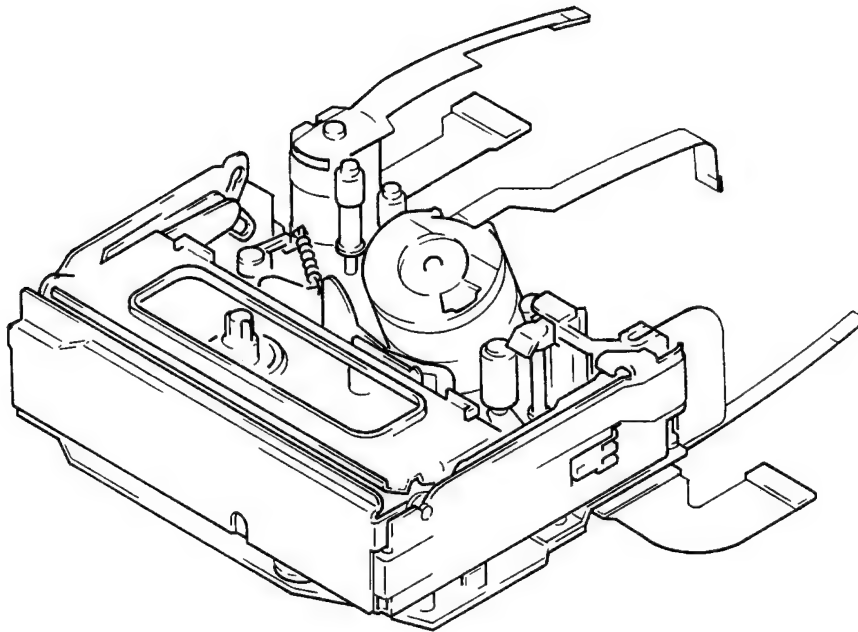
Ref. No.	Parts No.	Description	Remark	Former	New	Location	
						Printed wiring board	Schematic diagram
*	A-7072-227-A	VF-74 BOARD, COMPLETE *****					
		(Ref. No. 8,000 Series)					
C932	1-162-974-11	CERAMIC CHIP	0.01uF 50V	○	X	D-2	G-27
C932	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	X	○	D-2	G-27

DV MECHANICAL ADJUSTMENT MANUAL I

D MECHANISM

File with the SERVICE MANUAL.

Mini **DV** Digital
Video
Cassette



Digital MECHANISM
SONY®

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1. PREPARATION FOR MECHANICAL CHECK, ADJUSTMENT AND MAINTENANCE

PREPARATION

- For removal of the cabinet and boards, refer to "Disassembly" in each service manual.
- When the adjustment and maintenance for the mechanical section are performed, select the condition of mechanical deck using mode selector II for easy use to operate. Refer to "2-5. How to handle the mode selector II" to select the following each ☐ mode.

1-1. CASSETTE COMPARTMENT ASSEMBLY

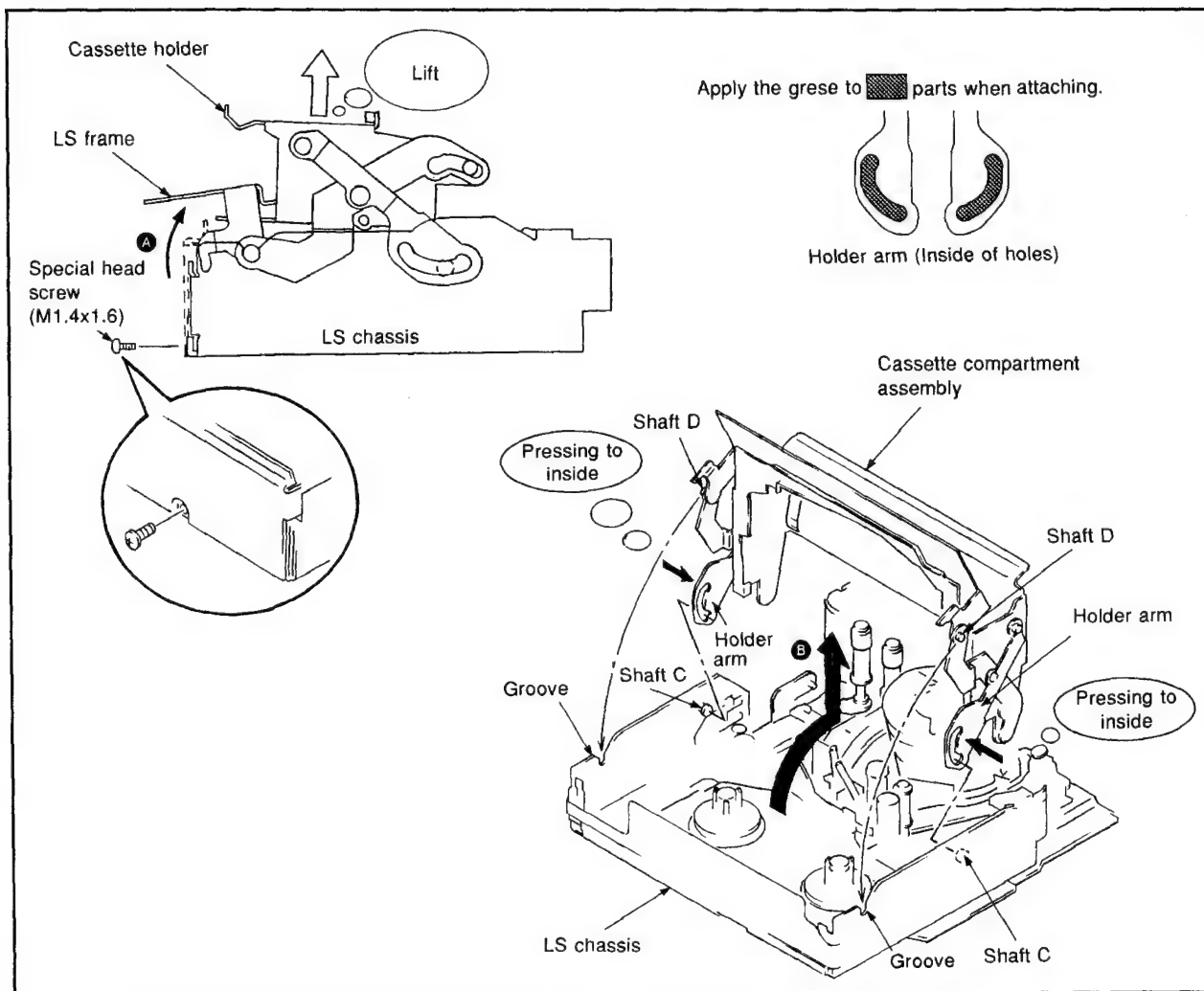
1. Removing

- 1) Set the ☐ **USE—EJ** mode.
- 2) Remove the screw.
- 3) Lift the cassette holder, and move the LS frame to the direction of arrow **A**.
- 4) Lift the cassette compartment assembly to the direction of arrow **B**, then remove pressing the left and right holder arms to inside.

2. Attaching

- 1) Set the ☐ **USE—EJ** mode.
- 2) Apply the grease (two positions, 1.5 mm dia.) to the cassette compartment assembly, then attach it to the shaft C pressing the holder arms to inside.
Grease: Floil Grease (SG-941)
- 3) Pull down the cassette compartment assembly to front, attach the shaft D to a groove of LS chassis, then pull down the LS frame to front.
- 4) Attach the screw.

Fixing torque: 0.0588 N · m (0.6 kg · cm)



2. PERIODIC CHECK AND MAINTENANCE

- Carry out the following maintenance and periodic checks not only to fully display the functions and performance of the set, but also for the equipment and tape. After repairing, service the set as follows, regardless of the length of use.

2-1. CLEANING OF ROTARY DRUM ASSEMBLY

- 1) Press a wiping cloth (Ref No. J-2) moistened with cleaning fluid (Ref No. J-1) against the rotary drum assembly gently, and clean it while rotating the upper rotary drum assembly slowly with your finger in the counterclockwise direction.

Note: Do not rotate the motor on power or rotate the upper rotary drum assembly in the clockwise direction with your finger. The head tip will also be damaged if the wiping cloth is moved perpendicularly against it. Therefore, be sure to follow the above instructions when cleaning the rotary drum assembly.

2-2. CLEANING OF TAPE PATH SYSTEM (See Fig. 1.)

- 1) In the EJECT mode, clean the tape path systems (TG-1, 2, 3, 4, 5, 6, 7, capstan) and the lower drum using a superfine applicator (Ref No. J-3) moistened with cleaning fluid.

Note 1: Make sure that no oil or grease of the link mechanisms sticks to the superfine applicator (Ref No. J-3.)

Note 2: Do not use a applicator moistened with alcohol to the other guide cleaning. But clean the pinch roller using alcohol.

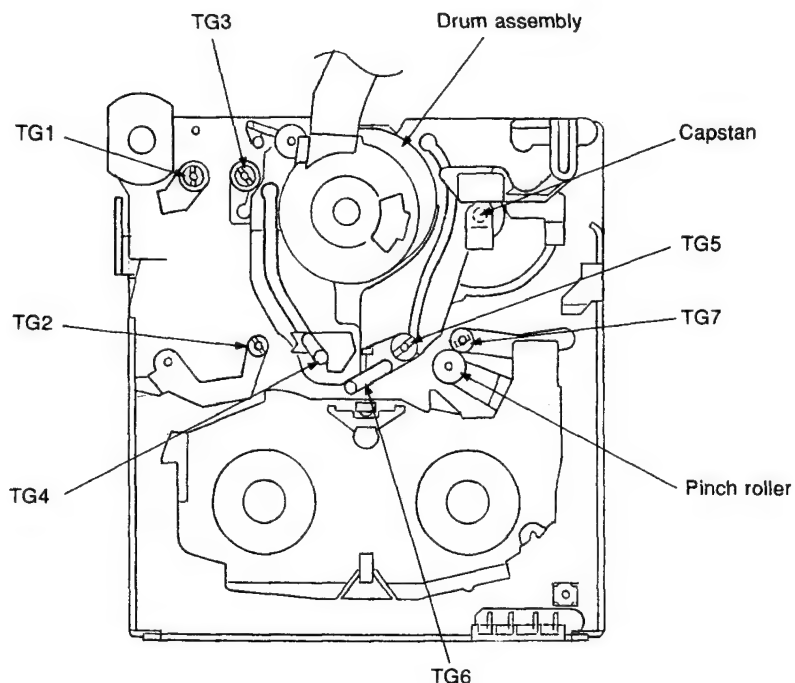


Fig. 1.

2-3. PERIODIC CHECKS

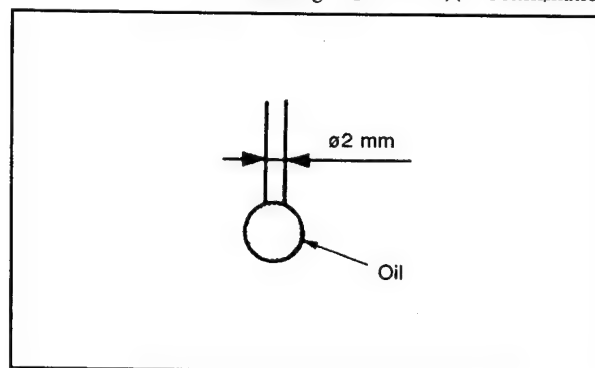
Location of Maintenance and Check		Hours of Use (H)										Remarks
		500	1000	1500	2000	2500	3000	3500	4000	4500	5000	
	Cleaning of tape path surface	○	○	○	○	○	○	○	○	○	○	Be careful of the oil
	Cleaning and degaussing of rotary drum assembly	○	○	○	○	○	○	○	○	○	○	Be careful of the oil
Driving System	Relay belt	—	☆	—	☆	—	☆	—	☆	—	☆	3-748-734-01
	Capstan shaft (Bearing)	—	☆	—	☆	—	☆	—	☆	—	☆	Make sure that no oil gets on the tape path surface.
	Conversion gear shaft Relay pulley shaft	—	◎	—	◎	—	◎	—	◎	—	◎	
	Loading motor	—	☆	—	☆	—	☆	—	☆	—	☆	A-7026-007-A
Performance Confirmation	Abnormal noise	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	
	Back tension measurement	—	☆	—	☆	—	☆	—	☆	—	☆	
	Brake system	—	☆	—	☆	—	☆	—	☆	—	☆	
	FWD } Torque measurement RVS }	—	☆	—	☆	—	☆	—	☆	—	☆	

○ : Cleaning ◎ : Oil ☆ : Confirmation

Note: When overhauling, refer to the checks above and replace parts.

Note: Oiling

- Be sure to use the specified oil. (If the viscosity of the oil is different, etc., problems may result.)
Oil: Part No. 7-661-018-18
(Mitsubishi Diamond Oil Hydrofluid NT-68)
- When lubricating bearings, be sure to use oil free from dust, etc. (If oil containing dusts, etc. is used, bearings may wear out, burn, etc.)
- A drop of oil means the amount on the tip of a 2 mm diameter stick as shown in the Fig 5.
- FLOIL Grease (SG-941): Part No. 7-662-001-39







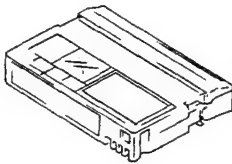
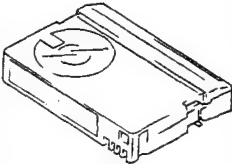
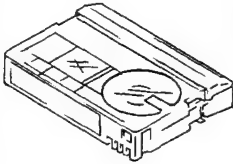
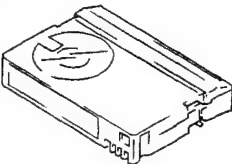
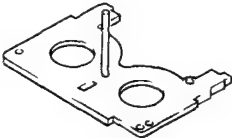






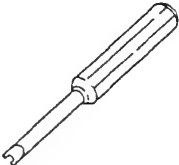

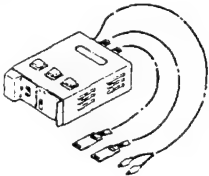
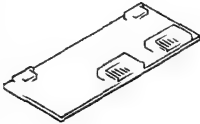

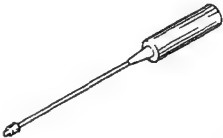
2-4. SERVICE JIGS LIST

Ref. No.	Name	Part No.	Fixtur No.	Usage, Others Application, etc
J-1	Cleaning fluid	Y-2031-001-0		
J-2	Wiping cloth	7-741-900-53		
J-3	Super fine applicator (Made by NIPPON APPLICATOR (P752D))			
J-4	Mirror (Small oval type)	J-6080-840-A	GD-2038	Tape path
J-5	Tracking tape (XH2-1) (NTSC/PAL)	8-967-997-01		Tape path
J-6	RVS torque tape	J-6082-327-A		
J-7	FWD torque (D mechanism) & RVS back tension (E mechanism) tape	J-6082-328-A		
J-8	FWD back tension tape (D/E mechanism)	J-6082-329-A		
J-9	Cassette standerd plate	J-6082-330-A		
J-10	Reel standard plate	J-6082-331-A		
J-11	Dummy drum (D mechnism)	J-6082-332-A		
J-12	TG1 preset base (D mechanism)	J-6082-333-A		
J-13	TG5 preset base (D mechanism)	J-6082-334-A		
J-14	Washer fixture ø0.8	J-6082-233-A		
J-15	Torque driver	J-9049-330-A		
J-16	Screwdriver for tape path	J-6082-026-A		For adjusting tape guide
J-17	Adjusting remote commander (RM-95 remodeled partly) Note1	J-6082-053-B		
J-18	Mode selector II	J-6082-282-A		For all models
J-19	Mode selector II change connctor board	J-6082-335-A		
J-20	Screw lock G (1401B)	7-432-114-11		
J-21	FWD/BACK Tension adjustment driver	J-6082-187-A		For adjusting FWD position and FWD back tension

Other equipment used

- Oscilloscope

Note 1: If the micro processor IC in the adjusting remote commander is not the new micro processor (UPD7503G-C56-12), the pages cannot be switched. In this case, replase with the new micro processor (8-759-148-35).

J-1 	J-2 	J-3 	J-4 	J-5 
J-6 	J-7 	J-8 	J-9 	J-10 
J-11 	J-12 	J-13 	J-14 	J-15 
J-16 	J-17 	J-18 	J-19 	J-20 
J-21 				

2-5. USE OF MODE SELECTOR II

2-5-1. Outline

This unit is a mechanism drive tool which supplements the maintenance of each mechanism deck. Its functions are described below.

1. Manual test

A mode which drives the motor only while the switch is ON. It enables the operator to control the motor as desired.

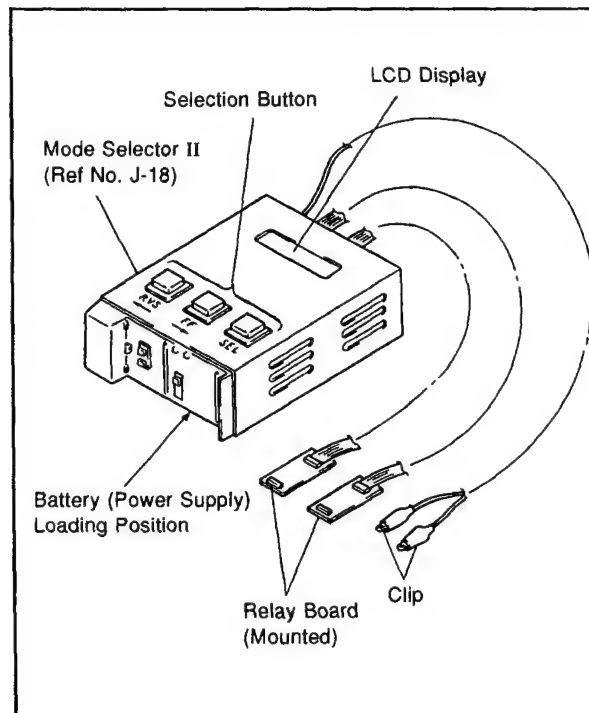
2. Step test

A mode which drives the motor until the current condition detected by the sensor changes to another condition. It enables the movements made by the motor in each operation to be controlled while being checked.

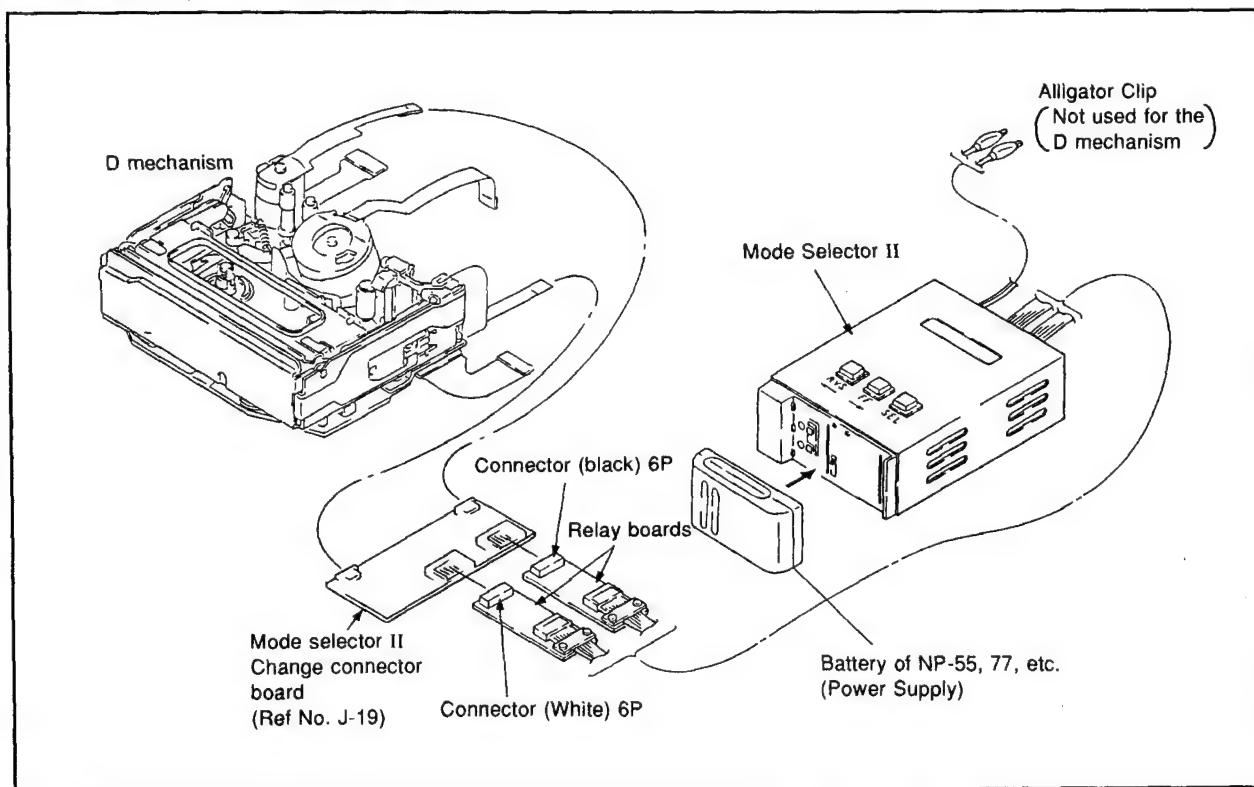
3. Auto test

A mode that checks if the mechanism operates normally according to the condition shift table recorded in the unit for each mechanism deck. All the conditions of the decks are checked through a series of operations.

An error message is displayed if incorrect shifts and conditions are detected and operations are stopped.

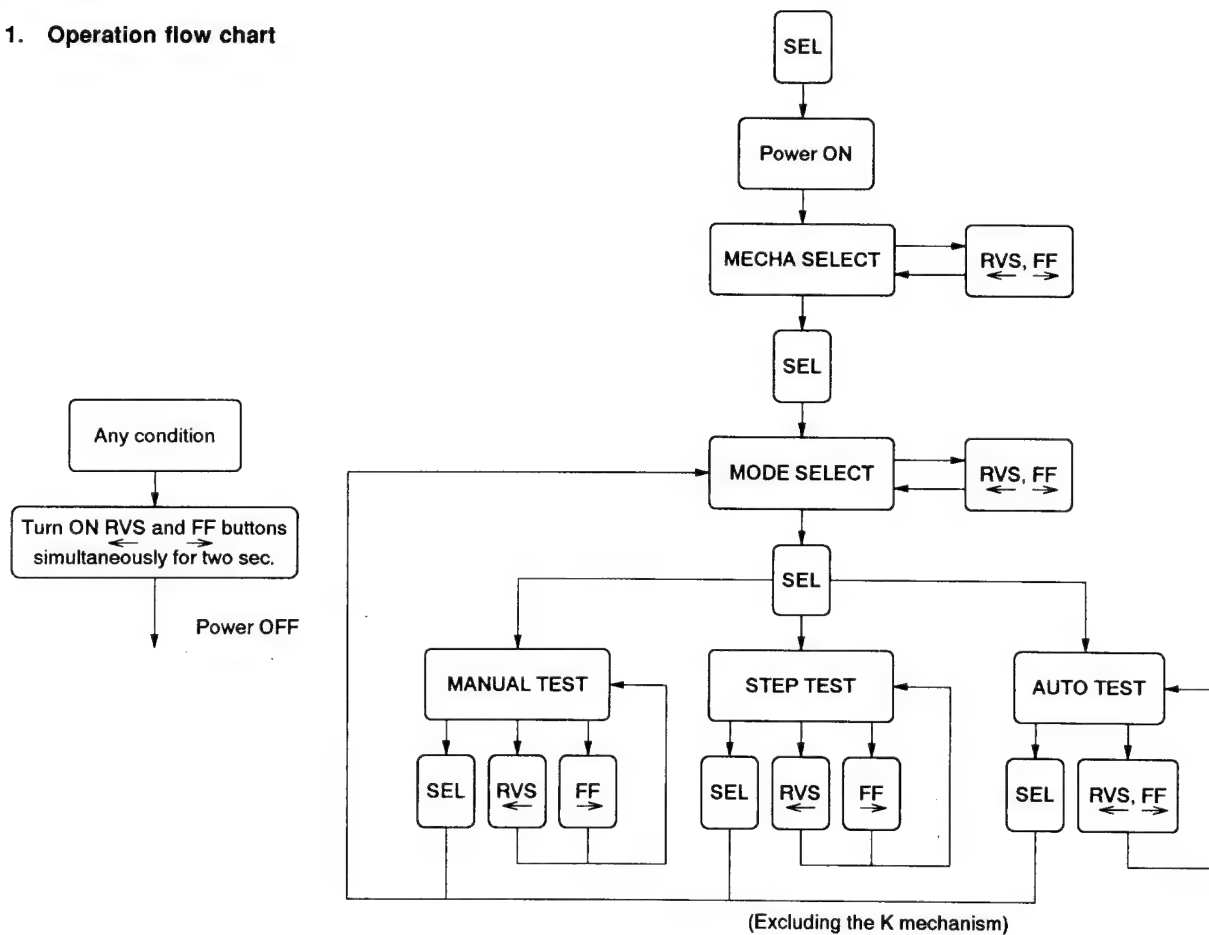


Mode Selector II (J-6082-282-A) Connection



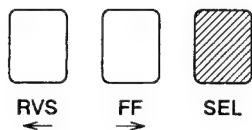
2-5-2. Operation

1. Operation flow chart



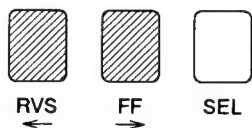
2. Turning ON the mode selector II

To turn ON the power supply, turn on the SEL button.



3. Turning OFF the mode selector II

To turn OFF the power supply, turn on the RVS and FF buttons simultaneously for more two seconds.



4. Mechanism selection

Immediately after the power supply has been turned on, "MECHA SELECT" will be displayed on the LCD. Select the desired mechanism using the RVS and FF buttons, and press the SEL button to complete the selection. (Fig. I shows the D mechanism.)

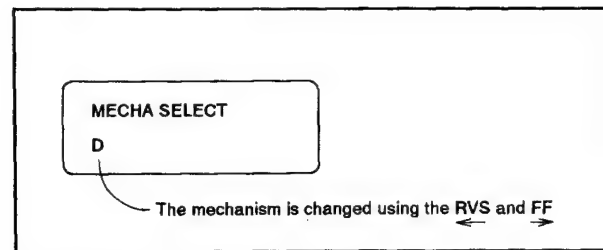


Fig. I

5. Mode selection

Select the test—"MANUAL", "STEP", and "AUTO"—to be executed.

Select the desired mode on the screen using the RVS and FF buttons, and press the SEL button to complete the selection.

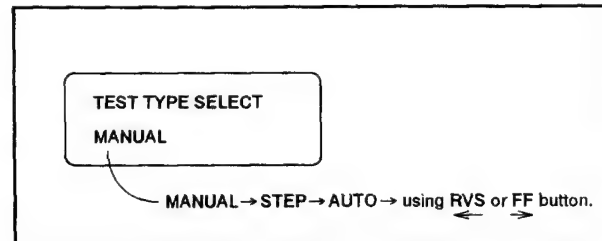


Fig. II

6. Manual test

A mode that drives the motor only when the RVS or FF button is pressed.

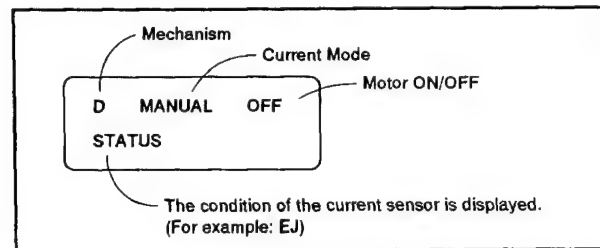


Fig. III

7. Step test

A mode that drives the motor until the direction of motor operations is set using the RVS and FF buttons and the current condition is changed.

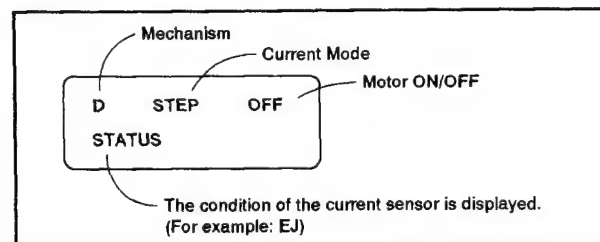


Fig. IV

8. Auto test

Each mechanism deck is checked for its recorded operation sequence. The check is executed by comparing the sensor signals generated in the operation sequence with the recorded operation sequence.

The same operation is carried out when the RVS or FF button is turned on.

Note: Sometimes the AUTO TEST spoils sequence due to a small range of [S. OFF], but this is not a D mechanical trouble.

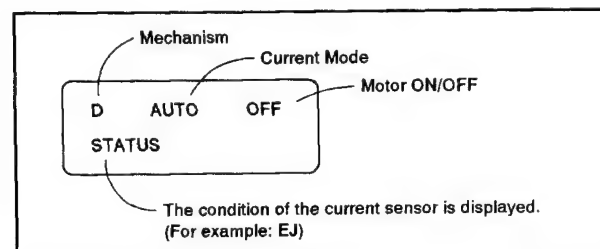


Fig. V

Mechanism condition (position) shifting order

After selecting the mechanism, select one mode from the two test modes, excluding the AUTO test. Then press the RVS or FF button and specify the mechanism condition (position). (Displayed at the STATUS area)

EJ↔USE↔S. OFF↔D. ON↔LE↔STOP↔FF↔R/P↔RVS

9. Battery alarm display

When the battery voltage (power supply unit of the unit) drops, this alarm is displayed, no operations can be carried out and the battery must be changed.

Code		MD name					D mechanism
		A	B	C	D		
1	0	1	0			1	EJ
1	1	1	0			2	USE
1	1	0	0			3	S. OFF
1	1	0	1			4	D. ON
1	0	0	1			5	LE
0	1	0	1			6	STOP
0	1	1	1			7	FF
1	0	1	1			8	R/P
0	0	1	1			9	RVS

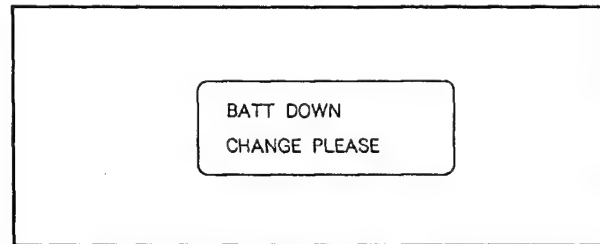


Fig. VI

3. MECHANISM SECTION CHECKS, ADJUSTMENTS AND REPLACEMENTS

3-1. DRUM ASSEMBLY (MOTOR FPC ASSEMBLY AND ELASTIC CONNECTORS)

1. Removing

<Motor FPC assembly and elastic connectors>

- Remove the two screws to remove the motor FPC assembly and elastic connectors.

<Drum assembly>

- Remove the three of drum fitting screw assembly to remove the drum assembly.

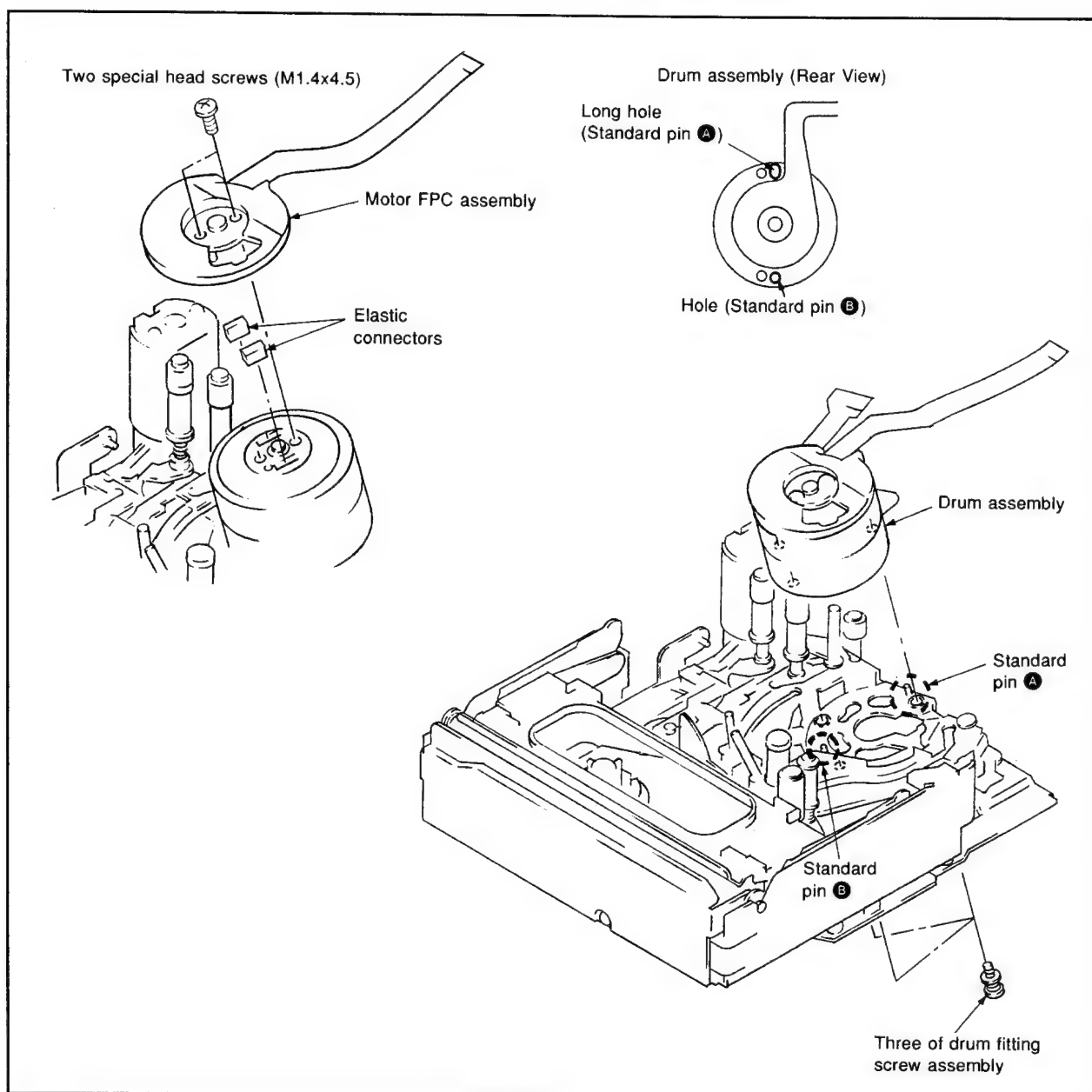
2. Attaching

<Motor FPC assembly and elastic connectors>

- 1) Attach the elastic connectors.
- 2) Attach the motor FPC assembly with two screws.
(Pay attention to adjust the position of holes.)
Fixing torque: 0.0490 N • m (0.5 kg • cm)

<Drum assembly>

- 1) Attach the holes on the rear side of drum assembly to standard pin. (Pay attention to the direction of the drum.)
- 2) Attach the three of drum fitting screw assembly.
Fixing torque: 0.0392 N • m (0.4 kg • cm)
- 3) Refer to 2-1., perform the cleaning of drum assembly.
- 4) Carry out the tape path adjustment. (Refer to “4. TAPE PATH ADJUSTMENT”.)



3-4. TG3 GUIDE

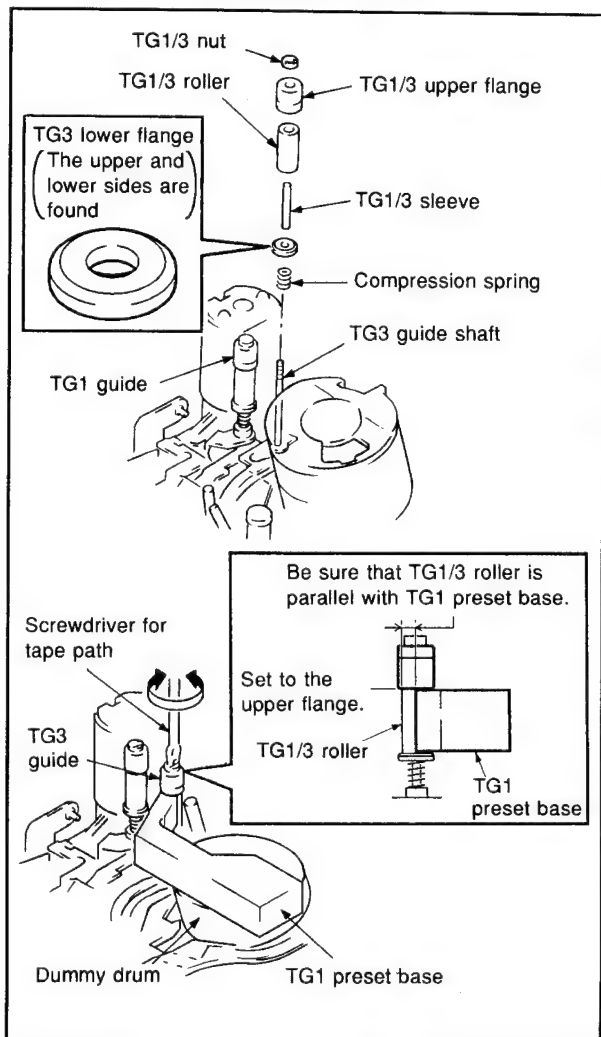
1. Removing

- Remove the TG1/3 nut with a screwdriver for tape path (Ref No. J-16), then remove in the order of TG1/3 upper flange, TG1/3 roller, TG1/3 sleeve, TG3 lower flange and compression spring.

2. Attaching

- Attach in the order of compression spring, TG3 lower flange, TG1/3 sleeve, TG1/3 roller, TG1/3 upper flange and TG1/3 nut.
- Refer to 3-1. to remove the drum assembly and attach the dummy drum (Ref No. J-11).
- Put the TG1 preset base (Ref No. J-12) on the dummy drum, adjust the TG1/3 nut with a screwdriver for tape path (Ref No. J-16) to meet the TG1/3 upper flange and a jig.
- Refer to 3-1. to attach the drum assembly after removing each jig.
- Refer to 2-2. to clean the TG3 guide.
- Adjust the tape path.
(Refer to "4. TAPE PATH ADJUSTMENT".)

Note: If the TG3 guide shaft is damaged, it will be necessary to replace the mechanical chassis block assembly.
(Refer to "5. EXPLODED VIEWS".)



3-5. TG7 GUIDE

1. Removing

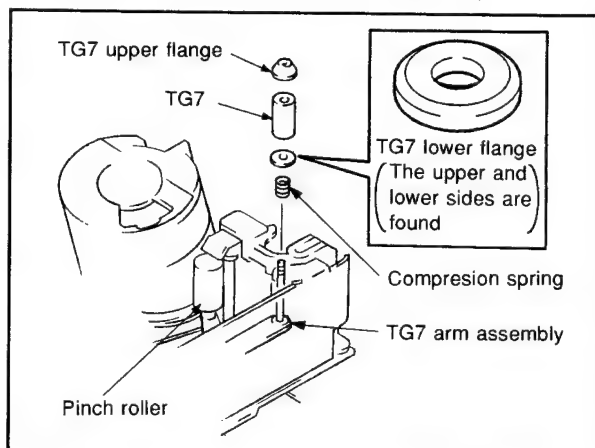
- Remove the TG7 upper flange with a screwdriver for tape path (Ref No. J-16), then remove in the order of TG7, TG7 lower flange and compression spring.

2. Attaching

- Attach in the order of compression spring, TG7 lower flange, TG7 and TG7 upper flange.

Note: Fix temporarily not to come out the TG7 guide shaft from the TG7 upper flange.

- Refer to 2-2. to clean the TG7 guide.
- Adjust the tape path.
(Refer to "4. TAPE PATH ADJUSTMENT".)



3-6. S POSITIONING AND T POSITIONING

1. Removing

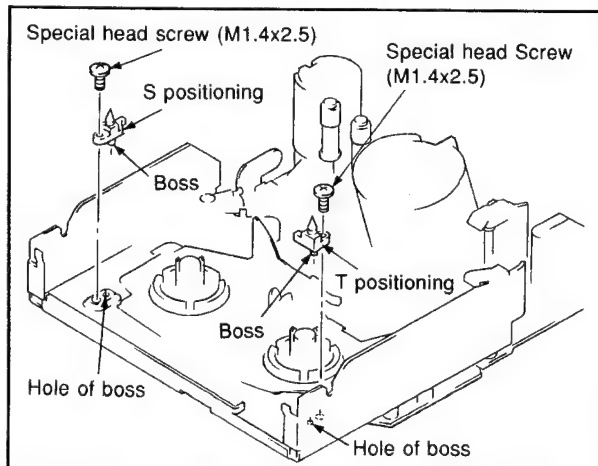
- Refer to 1-1. to lift the cassette compartment assembly.
- Remove each screw, then remove the S positioning and T positioning.

2. Attaching

- Attach the S positioning and T positioning with screws.
Fixing torque: 0.0588 N · m (0.6 kg · cm)

Note: Pay attention to adjust the position of each positioning and side S or T.

- Refer to 1-1. to attach the cassette compartment assembly.



3-7. LOCK LEVER AND SLIDER FOLLOWER

1. Removing

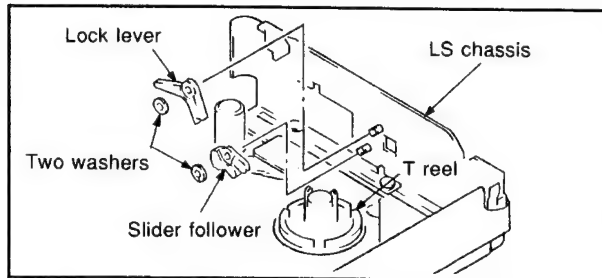
- 1) Refer to 1-1. to lift the cassette compartment assembly.
- 2) Remove each washer, then remove in the order of lock lever and slider follower.

2. Attaching

- 1) Attach in order of slider follower and lock lever with washers.

Note: Pay attention to the direction and attaching position of lock lever and slider follower.

- 2) Refer to 1-1. to attach the cassette compartment assembly.



3-8. LM MOTOR ASSEMBLY

1. Removing

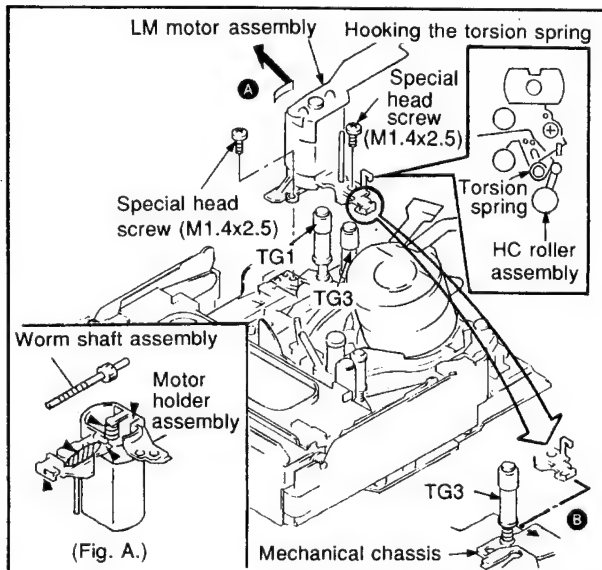
- 1) Set the **LE—STOP** mode.
- 2) Remove the two of screws to remove the LM motor assembly in the direction of arrow **A**.

2. Attaching

- 1) Set the **LE—STOP** mode.
- 2) Attach the LM motor assembly with the two of screws in the direction of arrow **B**.
Fixing torque: 0.0588 N · m (0.6 kg · cm)
- 3) Hook the torsion spring of HC roller assembly.

<Note for replacement of the worm shaft assembly>

- Apply the grease which is applied to the worm shaft assembly before replacement to **►** (Fig. A) of the motor holder assembly.



3-9. CAPSTAN MOTOR

There is an axis compensating spacer between the capstan motor and mechanical chassis for this mechanical deck. It is necessary to remember the attached position (one of **a** or **b**) and thickness (normal: 100μm) when removing the capstan motor because the set has its own attaching position and thickness.

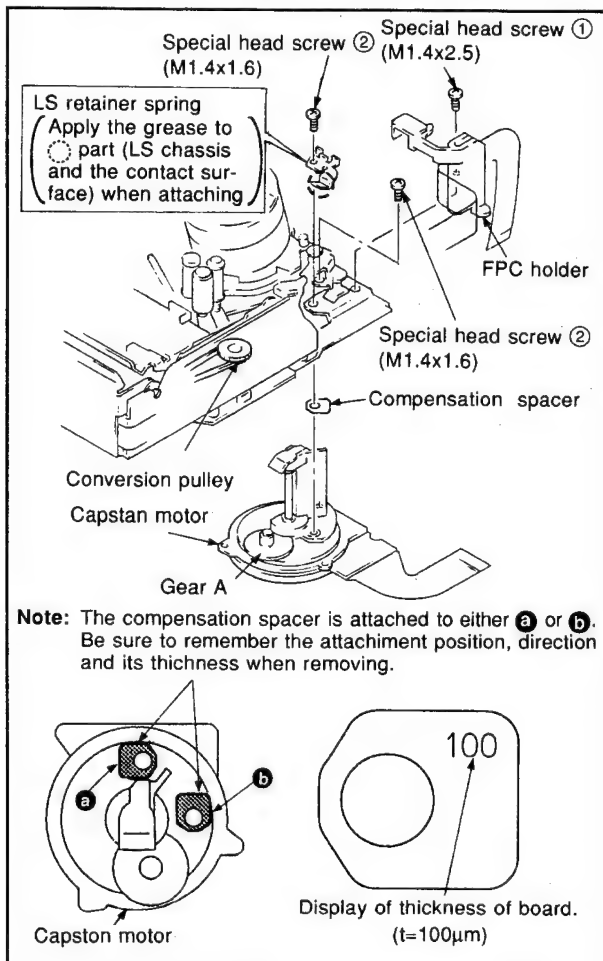
1. Removing

- 1) Set the **D. ON—EJ** mode.
- 2) Remove the screw ① to remove the FPC holder.
- 3) Remove the two of screw ② to remove the capstan motor.

Note: Not to lose the compensating spacer. Be sure to remember the attaching position and thickness.

2. Attaching

- 1) Set the **D. ON—EJ** mode.
 - 2) Put the compensating spacer on the capstan motor.
- Note:** Be sure to check that it is satisfied the same condition with when removing.
- 3) Engage the gear A and conversion pulley.
 - 4) Apply the grease (1.5 mm dia.) to the LS retainer spring.
Grease: Floil Grease (SG-941)
 - 5) Attach the capstan motor with two of screw ②.
Fixing torque: 0.0981 N · m (1 kg · cm)
 - 6) Attach the FPC holder with a screw ①.
Fixing torque: 0.0588 N · m (0.6 kg · cm)



3-10. LED BASE ASSEMBLY

1. Removing

- 1) Refer to 1-1. to lift the cassette compartment assembly.
- 2) Remove the LED holder, then remove the LED (FP-242).
- 3) Remove the screw, then remove the LED base assembly in the direction of arrow.

2. Attaching

- 1) Hook the three notches of LED base assembly to each slit on the shaft A, B and C, so that the LED (FP-242) is not inserted.

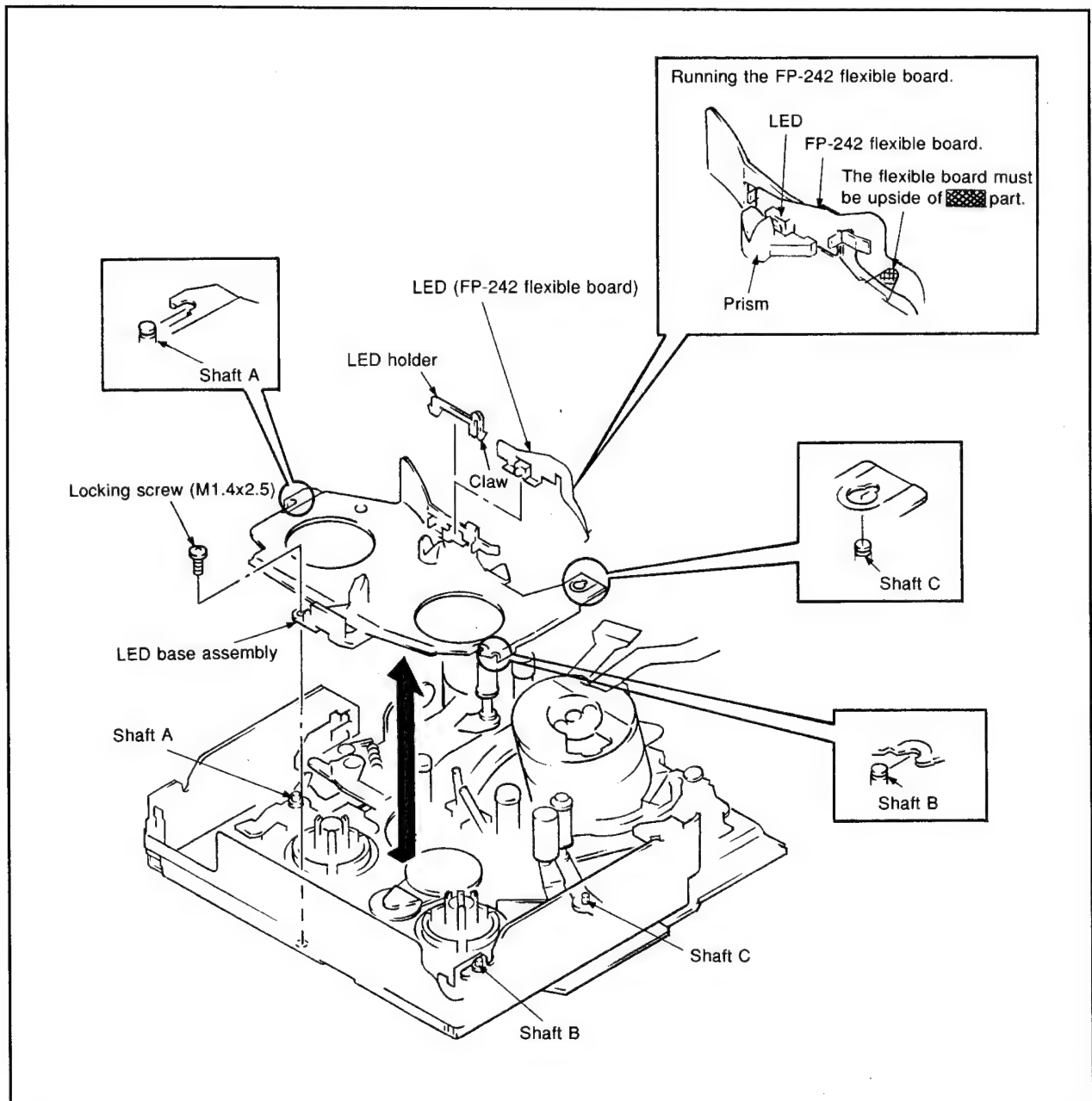
Note: Pay attention to your fingerprints and scratch.

- 2) Attach the screw and apply the screw lock (Ref No. J-20).
Fixing torque: $0.0588 \text{ N} \cdot \text{m}$ ($0.6 \text{ kg} \cdot \text{cm}$)

- 3) Put the LED (FP-242) in the space of prism, then remove the LED holder.

Note: Pay attention to pull around the FP-242.

- 4) Refer to 1-1. to attach the cassette compartment assembly.



3-11. TG7 ARM ASSEMBLY

1. Removing

- 1) Refer to 1-1. to remove the cassette compartment assembly.
- 2) Refer to 3-10. to remove the LED base assembly.
- 3) Set the **[EJ]** mode, and remove in order of TG7 arm assembly and torsion spring.
- 4) Refer to 3-5. to remove the TG7 guide.

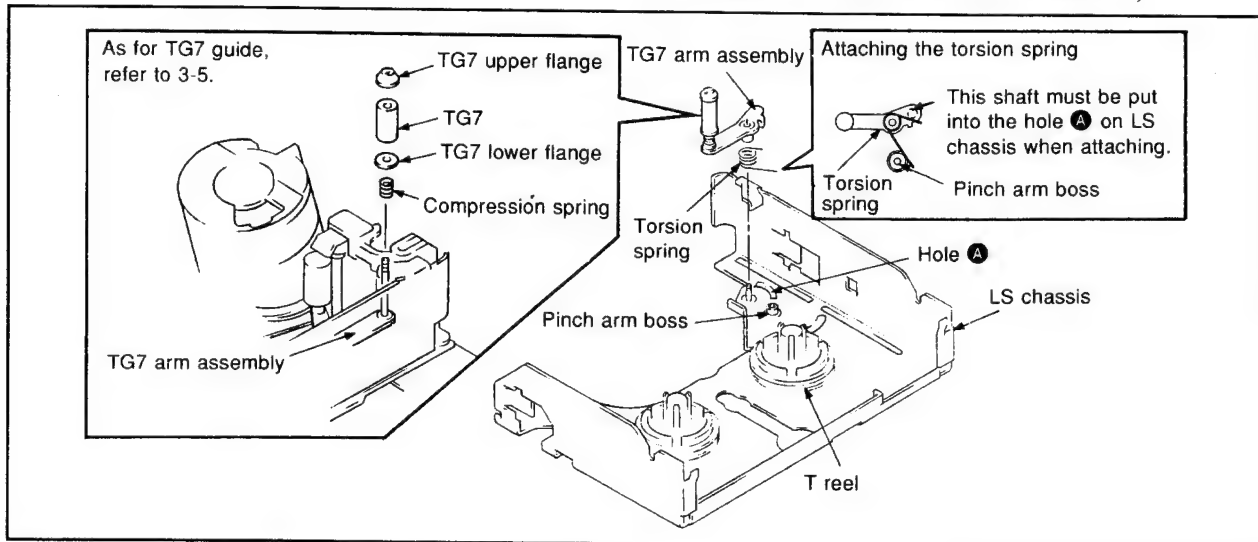
2. Attaching

- 1) Set the **[EJ]** mode.
- 2) Refer to 3-5. to attach the TG7 guide.
- 3) Attach in the order of torsion spring and TG7 arm assembly.

Note: Pay attention to attach the torsion spring.

- 4) Refer to 3-10. to attach the LED base assembly.
- 5) Refer to 1-1. to attach the cassette compartment assembly.
- 6) Refer to 2-2. to clean the TG7 guide.
- 7) Adjust the tape path.

(Refer to "4. TAPE PATH ADJUSTMENT".)



3-12. PINCH ARM ASSEMBLY

Note: When the pinch arm assembly is replaced, be sure to replace the extension spring together.

1. Removing

- 1) Refer to 1-1. to remove the cassette compartment assembly.
- 2) Refer to 3-10. to remove the LED base assembly.
- 3) Set the **[FF→RVS]** mode, remove the extension spring from the side of LS chassis, then remove the pinch arm assembly.

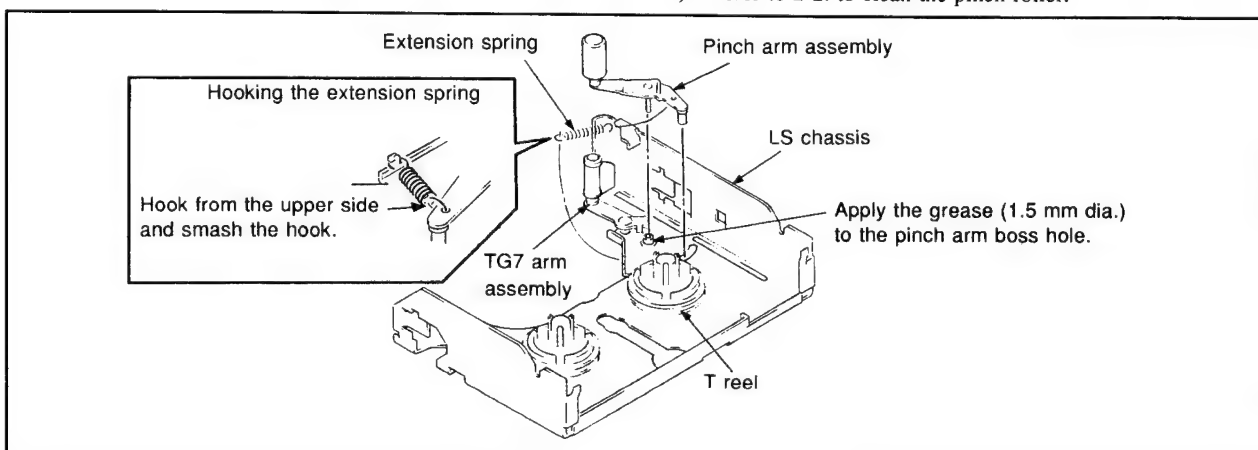
2. Attaching

- 1) Set the **[FF→RVS]** mode, apply the grease (1.5 mm dia.) to the pinch arm boss hole, attach the pinch arm assembly and hook the extension spring.

Grease: Floil Grease (SG-941)

Note: There is a specified direction of the spring hook.

- 2) Refer to 3-10. to attach the LED base assembly.
- 3) Refer to 1-1. to attach the cassette compartment assembly.
- 4) Refer to 2-2. to clean the pinch roller.



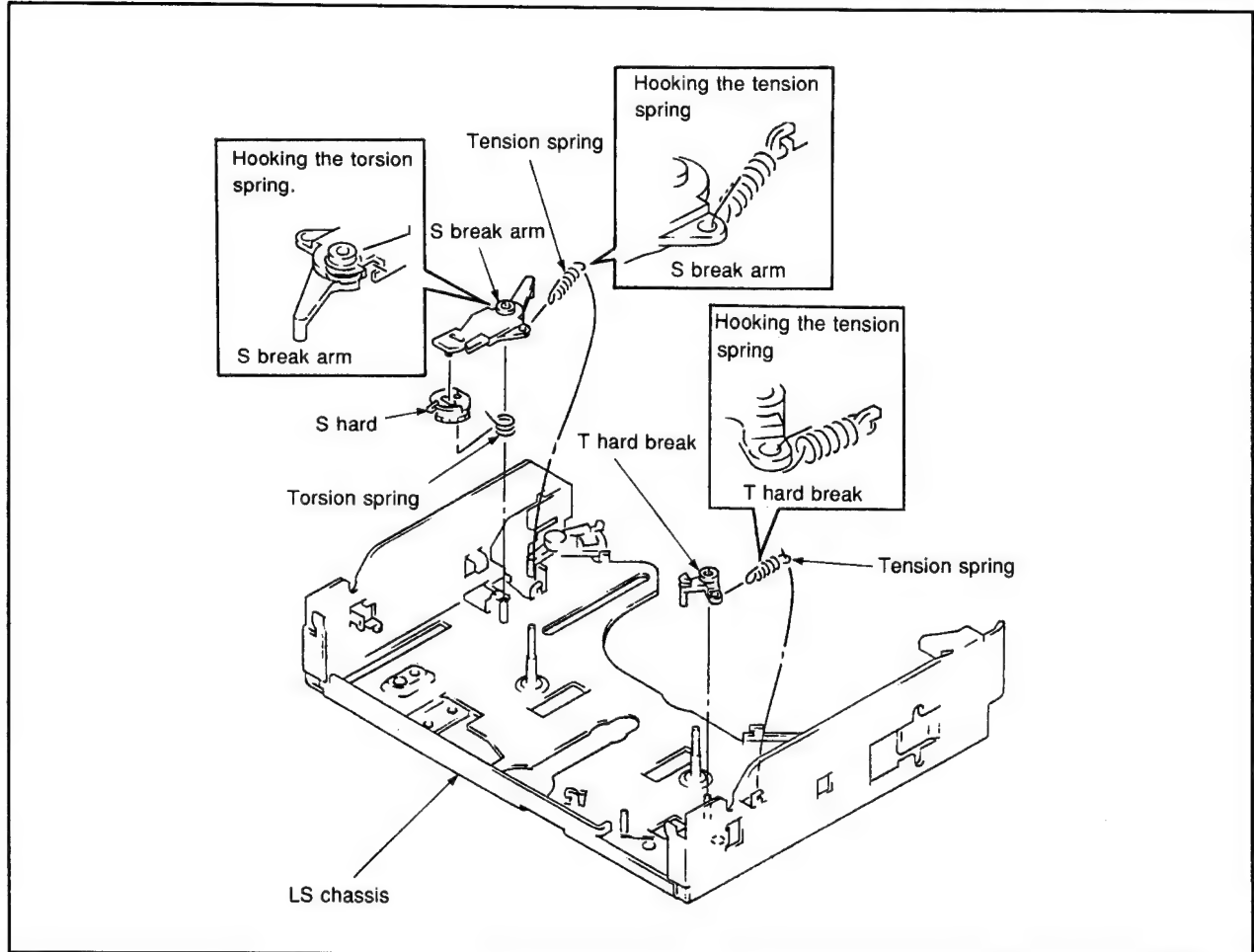
3-13. T HARD BREAK, S BREAK ARM AND S HARD

1. Removing

- 1) Refer to 1-1. to lift the cassette compartment assembly.
- 2) Refer to 3-10. to remove the LED base assembly.
- 3) Remove the tension spring from the side of LS chassis, then remove the T hard break, S break arm, torsion spring and S hard.

2. Attaching

- 1) Attach the S hard and torsion spring to the S break arm.
Note: Pay attention to attach the spring and S hard, and the hooking position of spring.
- 2) Hook each tension spring to the T hard break and S break arm, then attach each break to the LS chassis.
- 3) Hook the tension spring to the side of LS chassis.
- 4) Refer to 3-12. to attach the LED base assembly.
- 5) Refer to 1-1. to attach the cassette compartment assembly.



3-14. RVS BREAK AND LS CAM PLATE

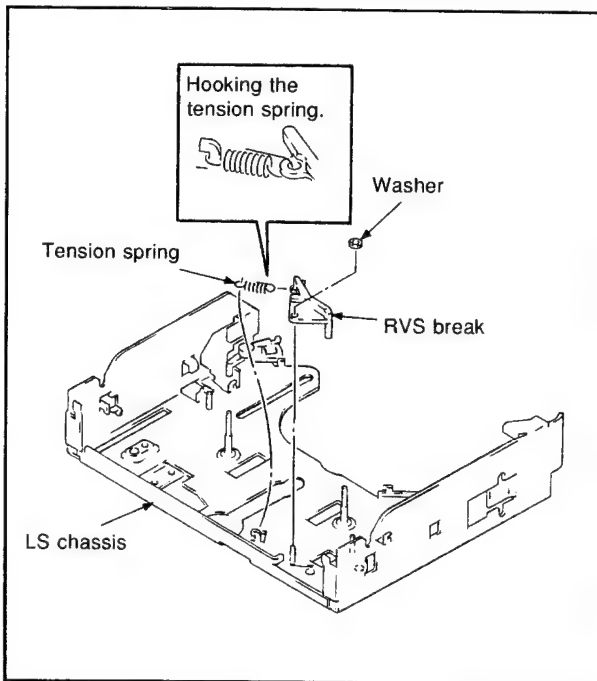
[RVS BREAK]

1. Removing

- 1) Refer to 1-1. to lift the cassette compartment assembly.
- 2) Refer to 3-10. to remove the LED base assembly.
- 3) After the washer is removed, remove the tension spring from the side of LS chassis, then remove the RVS break.

2. Attaching

- 1) Hook the tension spring to RVS break.
(There is a specified spring hook direction.)
- 2) Attach the RVS break with a washer to the LS chassis and hook the tension spring.
- 3) Refer to 3-10. to attach the LED base assembly.
- 4) Refer to 1-1. to attach the cassette compartment assembly.



[LS CAM PLATE]

1. Removing

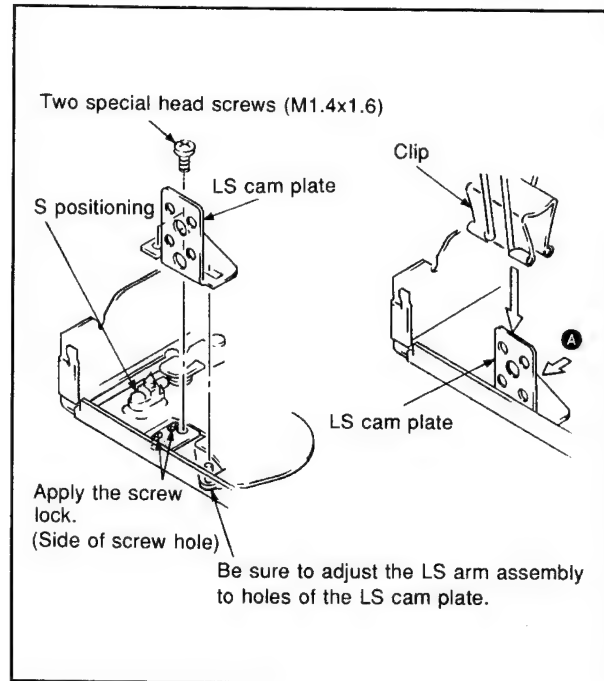
- 1) Refer to 1-1. to lift the cassette compartment assembly.
- 2) Refer to 3-10. to remove the LED base assembly.
- 3) Remove the two screws and remove the LS cam plate.

2. Attaching

- 1) Apply the lock screw (Ref No. J-20) (two positions), then fix the LS cam plate temporarily with two screws.
- 2) Set the [RP] mode, loosen the two screws, press in the direction of arrow **A**, clasp the LS cam plate and LS chassis with a clip etc., and fasten the screws tightly.

Fixing torque: 0.0981 N · m (1 kg · cm)

- 3) Refer to 3-10. to attach the LED base assembly.
- 4) Refer to 1-1. to attach the cassette compartment assembly.



3-15. TG7 ARM BLOCK ASSEMBLY AND TENSION REGULATOR BAND ASSEMBLY

When the TG7 arm block assembly is replaced, be sure to replace the extension spring together.

1. Removing

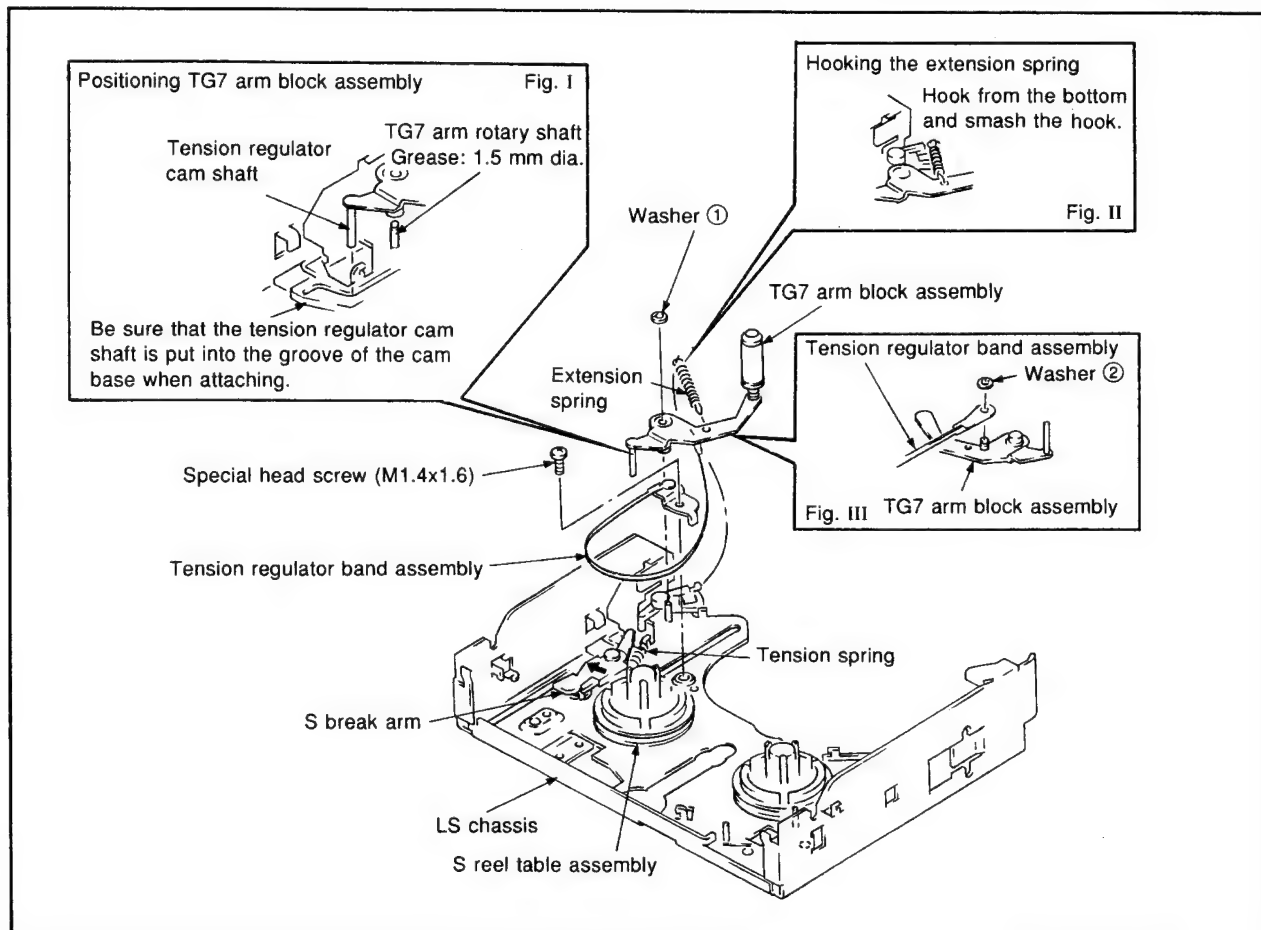
- 1) Refer to 1-1 to remove the cassette compartment assembly.
- 2) Refer to 3-10. to remove the LED base assembly.
- 3) Set the **[D. ON]** mode and check that the tension regulator band assembly is loose.
- 4) Remove the tension spring of S break arm (LS chassis side only), and keep away in the direction of arrow.
- 5) Remove the extension spring and a screw from the side of LS chassis, then remove the tension regulator band assembly.
- 6) Remove the washer ①, and remove the TG7 arm block assembly with the tension regulator band assembly together.
- 7) Remove the washer ②, and remove the tension regulator band assembly.
(Refer to the figure III.)

2. Attaching

- 1) Attach the tension regulator band assembly to the TG7 arm block assembly with the washer ②. And attach the extension spring to the arm block. (Refer to the figure II.)
Grease: Floil Grease (SG-941)

Note: There is a specified direction of the spring hook.

- 2) Set the **[D. ON]** mode, apply the grease (1.5 mm dia.) to the TG7 arm rotary shaft, then attach the TG7 arm block assembly to fit the groove of cam base and hook the extension spring. (Refer to the figure I.)
Grease: Floil Grease (SG-941)
- 3) Attach the washer ①.
- 4) Check the S break arm is slid in the direction of arrow, wind the tension regulator band to the S reel table assembly, then fix the tension regulator band assembly temporarily putting it to the side of S reel table assembly.
- 5) Hook the tension spring of S break arm to the LS chassis.
- 6) Refer to 3-10. to attach the LED base assembly.
- 7) Refer to 1-1. to attach the cassette compartment assembly.
- 8) Refer to 3-16. to adjust the position of FWD.
- 9) Refer to 3-17. to adjust the FWD back tension.
- 10) Refer to 3-18. to check the (RVS) torque on the reel table.



3-16. FWD POSITION ADJUSTMENT

Adjust the following items for replacement of the TG7 arm, tension regulator band, S reel table and others or removing parts of these.

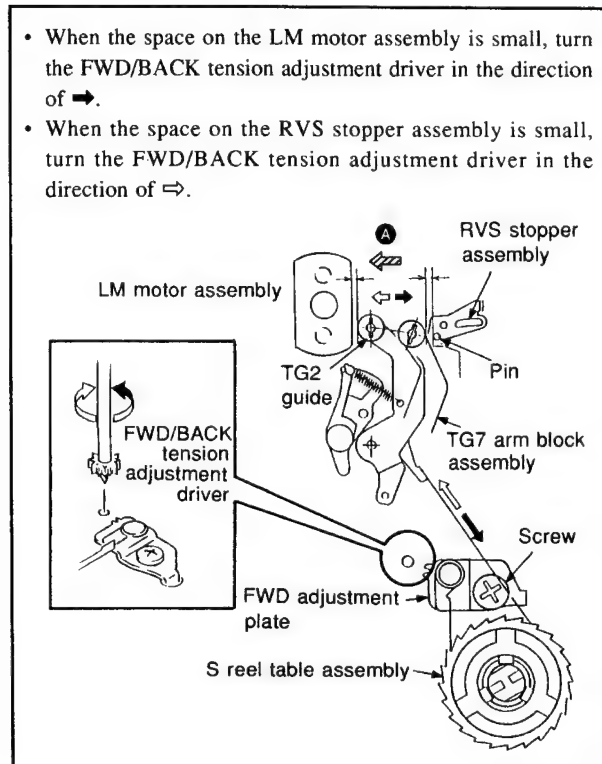
- FWD position adjustment
- FWD back tension adjustment (Refer to 3-17.)
- Reel table (RVS) torque check (Refer to 3-18.)

• Adjusting

- 1) Set the **[R/P]** mode, and check the position of TG2 guide.
- Make sure the space between TG2 guide and LM motor assembly and the space between TG2 guide and RVS stopper assembly's pin are equal (not to be hit to the guide and TG7 arm.).
- 2) Loosen the screw and move the TG2 guide with your fingers. Adjust the FWD adjustment plate with a FWD/BACK tension adjustment driver (Ref No. J-21), then fasten the screw tightly.

Fixing torque: $0.0588 \text{ N} \cdot \text{m}$ ($0.6 \text{ kg} \cdot \text{cm}$)

Note: Make sure there is enough space to move the TG2 in the direction of arrow **A**.



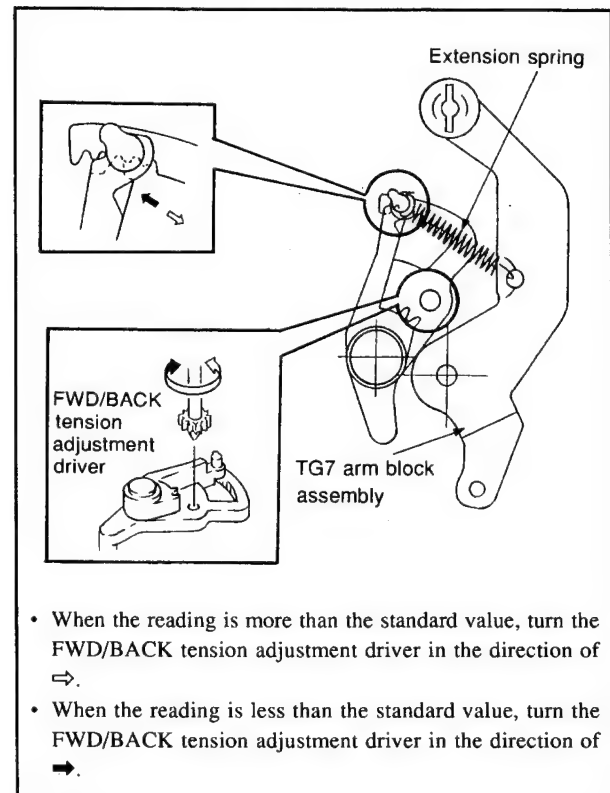
- When the space on the LM motor assembly is small, turn the FWD/BACK tension adjustment driver in the direction of \Rightarrow .
- When the space on the RVS stopper assembly is small, turn the FWD/BACK tension adjustment driver in the direction of \Rightarrow .

3-17. FWD BACK TENSION ADJUSTMENT

1. Adjusting

- 1) Set the FWD back tension cassette (Ref No. J-8).
 - 2) Set the **[REC]** mode, then check that the reading of S side is 0.417 to $0.490 \text{ mN} \cdot \text{m}$ (4.25 to $5 \text{ g} \cdot \text{cm}$) and the change is lower than $0.0490 \text{ mN} \cdot \text{m}$ ($0.5 \text{ g} \cdot \text{cm}$). If the reading is not satisfied the specification, adjust the followings.
- If the reading is higher than the specification (weaken the tension of spring)
Turn the adjusting screwdriver counterclockwise to satisfy the specification.
 - If the reading is lower than the specification (strengthen the tension of spring)
Turn the adjusting screwdriver clockwise to satisfy the specification.

Note: When the FWD/BACK tension adjustment driver is turned, take out the torque cassette once.



- When the reading is more than the standard value, turn the FWD/BACK tension adjustment driver in the direction of \Rightarrow .
- When the reading is less than the standard value, turn the FWD/BACK tension adjustment driver in the direction of \Rightarrow .

3-18. REEL TABLE TORQUE CHECK

• Adjusting

[FWD torque]

- 1) Set the FWD torque cassette (Ref No. J-7).
- 2) Set the FWD mode, then check that the torque value of the T reel table is 0.5393 to 1.258 mN • m (5.5 to 12.5 g • cm) at the center value of deflection and the change is 0.0981 mN • m (1.0 g • cm).

[RVS torque]

- 1) Set the RVS torque cassette (Ref No. J-6).
- 2) Set the RVS mode (by using EDIT SEARCH (–) button), then check that the torque value of the S reel table is 1.0787 to 1.9613 mN • m (11.0 to 20.0 g • cm) at the center value of deflection. **Note 1**

If the above values are not satisfied, check the position of FWD (tension regulator). Replace each reel table if there is no abnormal.

Note 1: Some speed of EDIT SEARCH is changed by double step due to strength of pressing. Select Normal speed (same as FWD) for the torque check.

3-19. T REEL TABLE ASSEMBLY

1. Removing

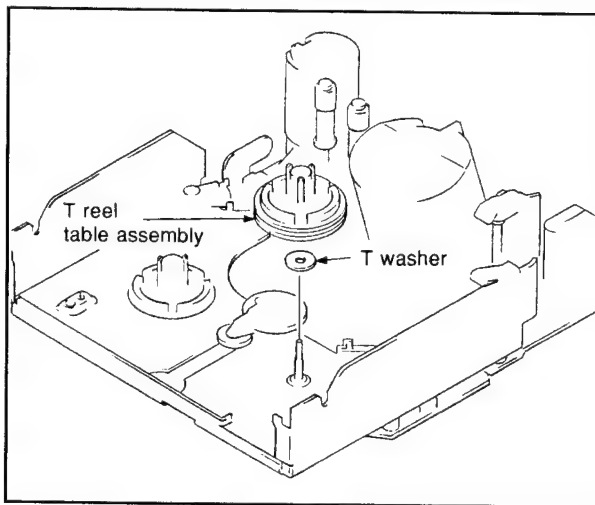
- 1) Refer to 1-1. to remove the cassette compartment assembly.
- 2) Refer to 3-10. to remove the LED base assembly.
- 3) Remove the T reel table assembly and T washer.

2. Attaching

- 1) Attach in the order of T washer and T reel table assembly.

Note: For attaching the T reel table assembly, perform “3-21. HEIGHT ADJUSTMENT FOR EACH REEL TABLE”.

- 2) Refer to 3-10. to attach the LED base assembly.
- 3) Refer to 1-1. to attach the cassette compartment assembly.
- 4) Refer to 3-18. to check the torque of the reel table.



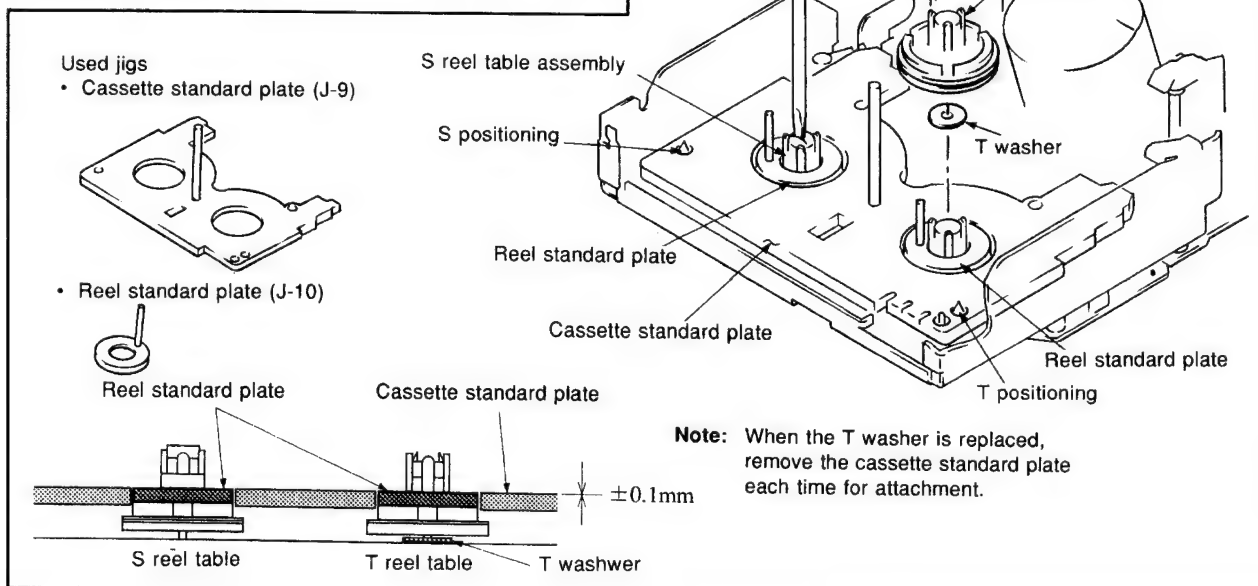
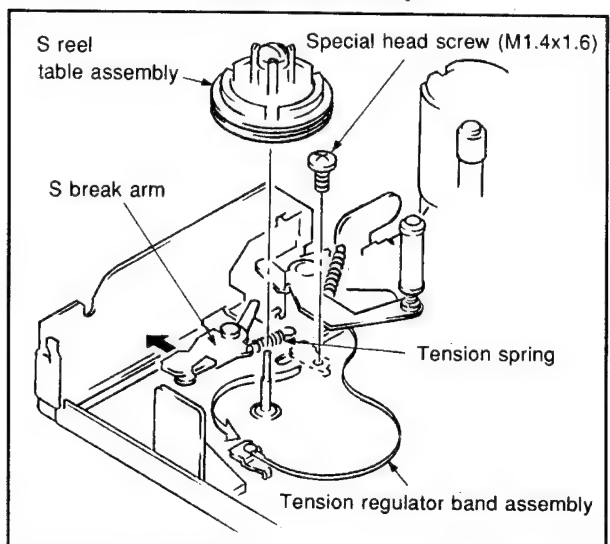
3-20. S REEL TABLE ASSEMBLY

1. Removing

- 1) Refer to 1-1. to remove the cassette compartment assembly.
- 2) Refer to 3-10. to remove the LED base assembly.
- 3) Remove the tension spring of the S break arm (LS chassis side only), and keep away in the direction of arrow.
- 4) Remove the screw and the tension regulator band assembly, then remove the S reel table assembly.

2. Attaching

- 1) Attach the S reel table assembly.
- 2) Set the **[D. ON]** mode, fix the tension regulator band assembly temporarily, and hook the tension spring. (There is a specified spring direction. (Refer to 3-13.))
- 3) Refer to 3-21. to adjust the height and tilt of each reel table.
- 4) Refer to 3-10. to attach the LED base assembly.
- 5) Refer to 1-1. to attach the cassette compartment assembly.
- 6) Refer to 3-16 to adjust the position of FWD.
- 7) Refer to 3-17. to adjust the FWD back tension.
- 8) Refer to 3-18. to check the reel's torque.

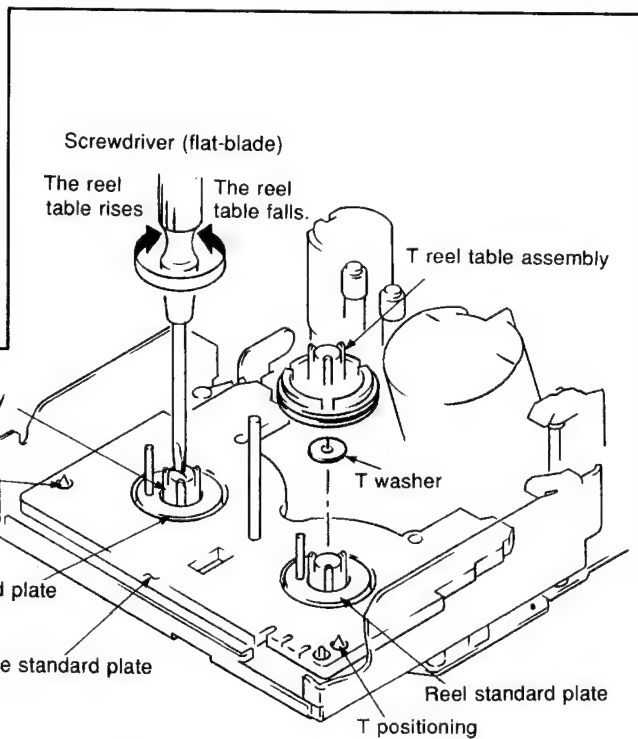


3-21. HEIGHT ADJUSTMENT FOR EACH REEL TABLE

Note: In either case one side of reel table adjustment is aimed, adjust both sides of reel table.

• Adjusting

- 1) Refer to 1-1. to lift the cassette compartment assembly.
 - 2) Set the **[R/P]** mode. Put the cassette standard plate (Ref No. J-9), turn the S reel table counterclockwise with a screwdriver (flat blade) to let down the reel table, and check that the cassette standard plate is not unstable. Be sure to remove the T reel table then.
 - 3) Put the reel standard plate (Ref No. J-10) to adjust the S reel table with a screwdriver (flat blade), then adjust the height of the cassette standard plate and reel standard plate. (Height: ± 0.1 mm, tilt: should be parallel)
 - 4) Adjust the S reel table. Attach in the order of T reel table, cassette standard plate and reel standard plate to adjust the height and azimuth. (Height: ± 0.1 mm, tilt: should be parallel)
- If not satisfied the specification, replace the T washer. (T reel side only)
- Yellow: 0.1 mm
Green: 0.25 mm
Black: 0.35 mm
- 5) Refer to 3-10. to attach the LED base assembly.
 - 6) Refer to 1-1. to attach the cassette compartment assembly.



Note: When the T washer is replaced, remove the cassette standard plate each time for attachment.

3-22. LS CHASSIS BLOCK ASSEMBLY, GOOSENECK ASSEMBLY, RELAY GEAR, LOCK SLIDER, COMPULSION ARM ASSEMBLY, CAM SLIDER AND PINCH RELEASE ARM

1. Removing

- 1) Refer to 1-1. to remove the cassette compartment assembly.
- 2) Refer to 3-10. to remove the LED base assembly.
- 3) Remove the screw ① and remove the FPC holder.
- 4) Set the **[S. OFF]** mode.
- 5) Remove the washer to remove the gooseneck assembly and relay gear.
- 6) Remove the tension spring on the side of LS chassis and remove the lock slider in the direction of arrow.
- 7) Set the **[D. ON]** mode, remove the two of screw ②, then set the **[S. OFF]** mode.

Note: Do not remove the cam slider from the LS chassis except the replacement.

- 8) Remove the two of screw ③ and remove the LS chassis block assembly.

Note: When removing the LS chassis block assembly, remove it pressing the TG7 arm block assembly not to give a shock to the tension regulator band. (Remove it pressing the pinch arm as well.)

- 9) Remove the compulsion arm assembly and pinch release arm.

2. Attaching

- 1) Set the **[S. OFF]** mode.
- 2) Apply the grease (seven positions, 3 mm dia.) to the mechanical chassis and LS arm assembly.
Grease: Floil Grease (SG-941)
- 3) Attach the compulsion arm assembly and pinch release arm.
- 4) Apply the grease (three positions, 3 mm dia.) to the pinch release arm, then put the LS chassis block assembly.

Note: Pay attention to adjust each position of the LS arm assembly, TG7 arm block assembly and pinch arm assembly.

- 5) Attach in the order of two of screw ③ (do not forget to put in the collar), lock slider and tension spring.

Fixing torque: 0.0981 N · m (1 kg · cm)

- 6) Set the **[D. ON]** mode, attach the cam slider (pay attention to the direction for attaching) and two of screw ②.

Fixing torque: 0.0981 N · m (1 kg · cm)

- 7) Attach the gooseneck assembly with a relay gear and a washer.

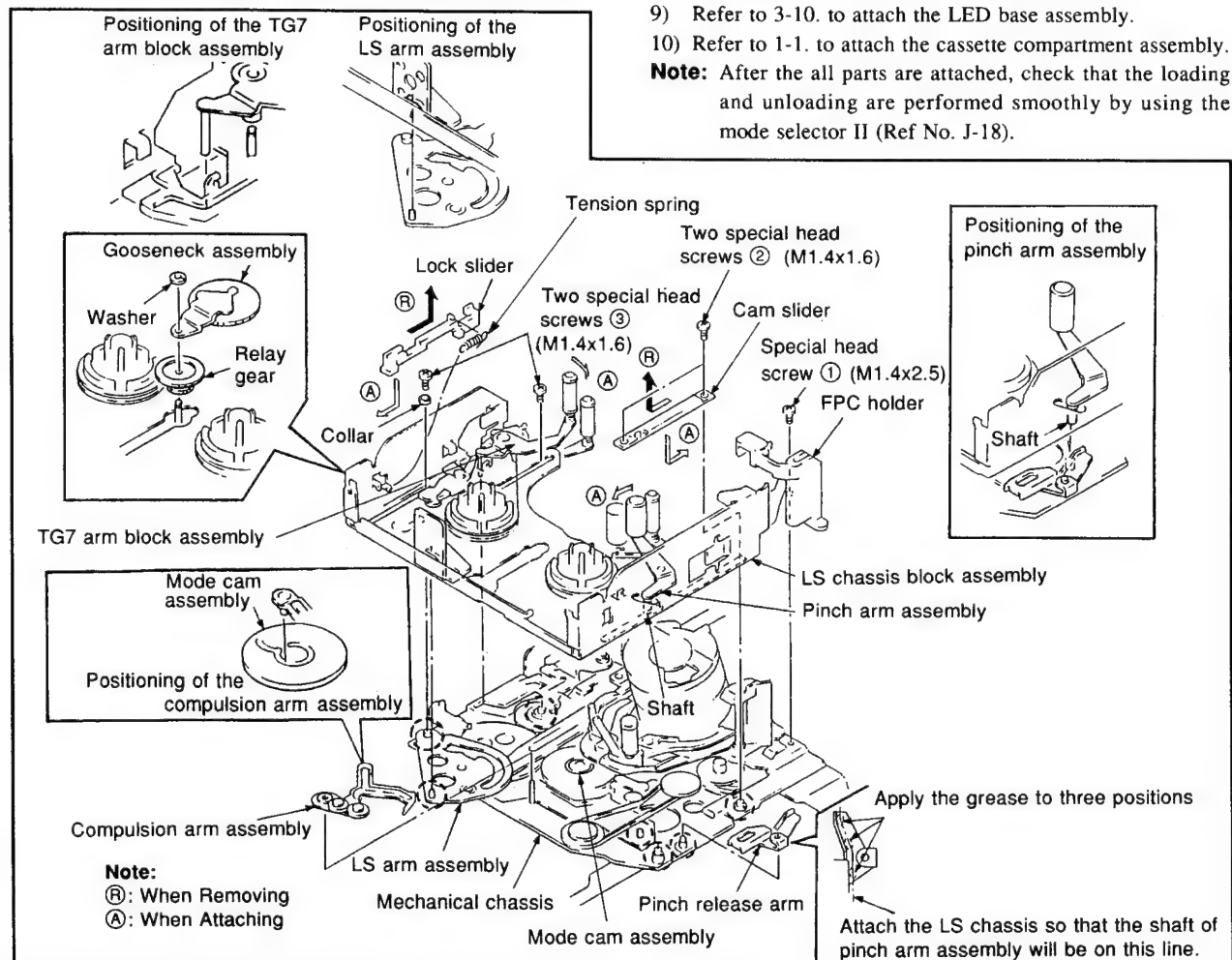
- 8) Attach the FPC holder with a screw ①.

Fixing torque: 0.0588 N · m (0.6 kg · cm)

- 9) Refer to 3-10. to attach the LED base assembly.


- 10) Refer to 1-1. to attach the cassette compartment assembly.

Note: After the all parts are attached, check that the loading and unloading are performed smoothly by using the mode selector II (Ref No. J-18).

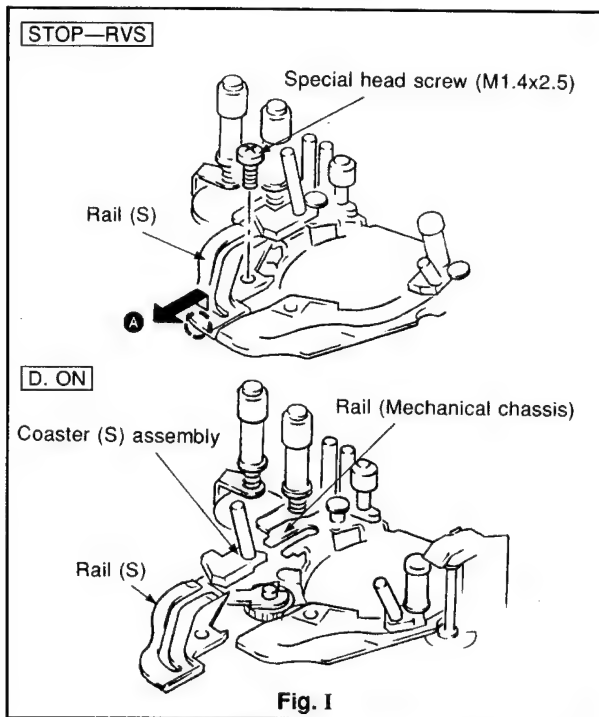


3-23. GL (S) BLOCK ASSEMBLY (COASTER (S) ASSEMBLY, GL (S) ASSEMBLY AND RAIL (S))

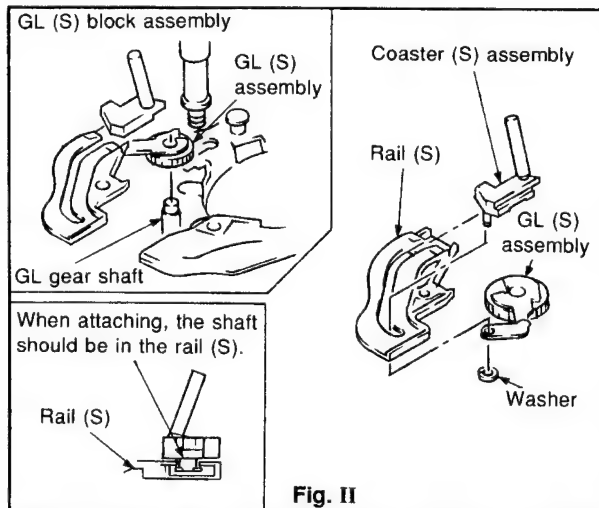
1. Removing

- 1) Refer to 1-1. to remove the cassette compartment assembly.
- 2) Refer to 3-10. to remove the LED base assembly.
- 3) Refer to 3-22. to remove the gooseneck assembly and LS chassis block assembly.
- 4) Refer to 3-1. to remove the drum assembly.
- 5) Set the **[STOP—RVS]** mode.
- 6) Remove the screw, pick up the  part, slide the rail (S) in the direction of arrow **A**, and set the **[D. ON]** mode.

Note: Check that the coaster (S) assembly is removed from the rail of mechanical chassis then.



- 7) Pick up and remove the GL (S) assembly.
- 8) Remove the washer and remove each parts.



2. Attaching

- 1) Attach the coaster (S) assembly to the rail (S), then attach the GL (S) assembly. (Refer to the figure II)

Note: Pay attention to the direction of each parts' attachment.

- 2) Set the **[S. OFF]** mode.

Note: The **[S. OFF]** mode is the condition that all phase are matched as far as it is not abnormal. If there is a difference of phase, refer to "3-30. EACH GEAR AND MODE CAM ASSEMBLY PHASE ADJUSTMENT" to adjust the phase.

- 3) Apply the grease (1.5 mm dia.) to the GL gear shaft and attach the GL (S) assembly so that the each phase meets the LS arm assembly and GL (T) assembly.

Grease: Floil Grease (SG-941)

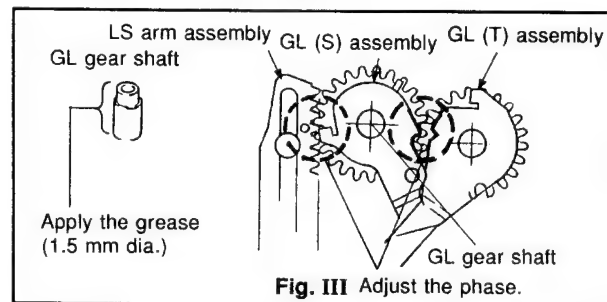


Fig. III Adjust the phase.

- 4) Put the coaster (S) assembly to the rail of mechanical chassis by using the mode selector II (Ref No. J-18).

Note: Press the mode selector's button by instalments adjusting the direction of the coaster (S) assembly.

Mode display: **[S. OFF]** — **[STOP—RVS]**

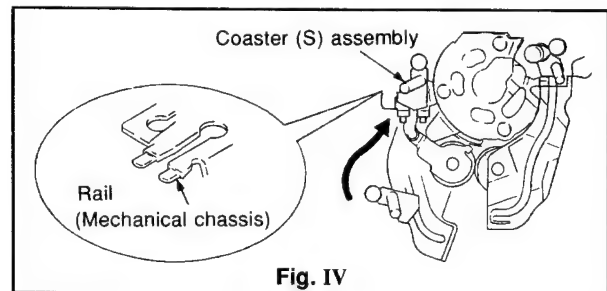


Fig. IV

- 5) Attach the rail (S) to the rail of mechanical chassis and GL gear shaft in order, and fasten the screw.

Fixing torque: 0.00588 N · m (0.6 kg · cm)

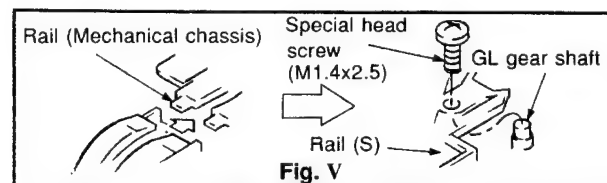



Fig. V

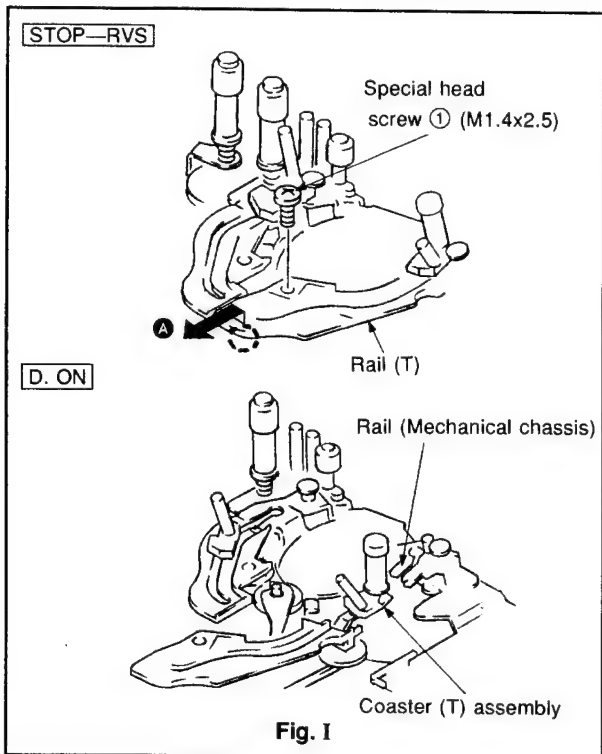
- 6) Refer to 3-1. to attach the drum assembly.
- 7) Refer to 3-22. to attach the gooseneck assembly and LS chassis block assembly.
- 8) Refer to 3-10. to attach the LED base assembly.
- 9) Refer to 1-1. to attach the cassette compartment assembly.

3-24. GL (T) BLOCK ASSEMBLY (COASTER (T) ASSEMBLY, GL (T) ASSEMBLY, RAIL (T) AND TG5 ASSEMBLY)

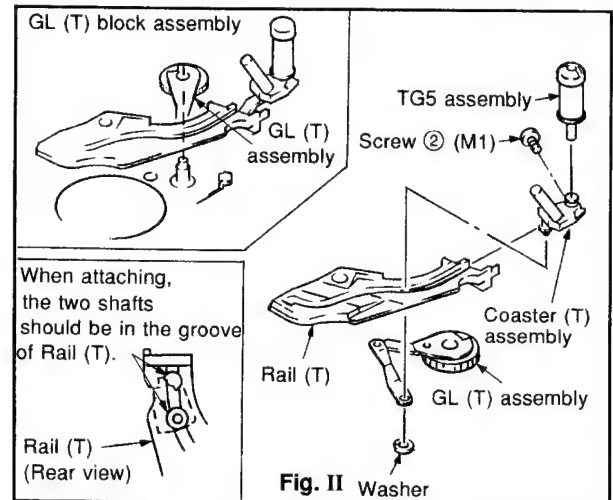
1. Removing

- 1) Refer to 1-1. to remove the cassette compartment assembly.
- 2) Refer to 3-10. to remove the LED base assembly.
- 3) Refer to 3-22. to remove the gooseneck assembly and LS chassis block assembly.
- 4) Refer to 3-9. to remove the capstan motor.
- 5) Refer to 3-1. to remove the drum assembly.
- 6) Set the **STOP-RVS** mode.
- 7) Remove the screw ①, pick up the  part, remove the rail (T) in the direction of arrow **A**, then set the **D. ON** mode.

Note: Check that the coaster (T) assembly is removed from the rail of mechanical chassis then.



- 8) Pick up the GL (T) assembly with a pair of tweezers (a pincette) and remove.
- 9) Remove a washer and a screw ②, then remove each parts.



2. Attaching

- 1) Fix temporarily the TG5 assembly with a screw ② to the coaster (T) assembly. (Refer to the figure II)

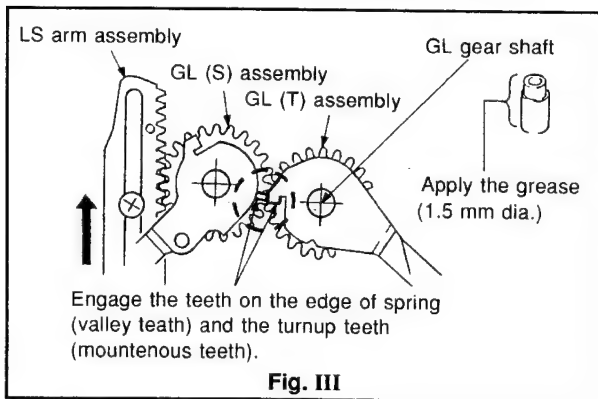
Fixing torque: 0.0490 N · m (0.5 kg · cm)

- 2) Attach the coaster (T) assembly to the rail (T), then attach the GL (T) assembly. (Refer to the figure II)

Note: Pay attention to the direction of each parts' attachment.

- 3) Apply the grease (1.5 mm dia.) to the GL gear shaft and attach the GL (T) assembly so that the each phase meets the GL (S) assembly.

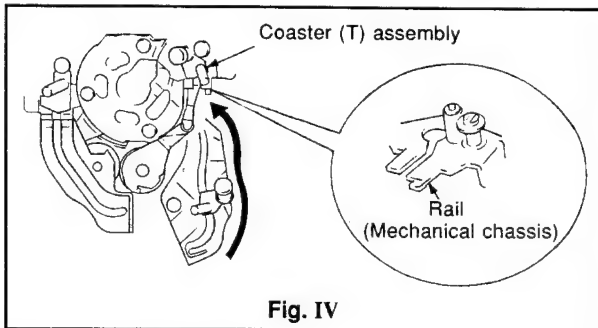
Note: After the attachment, set the **[S. OFF]** mode to check the phase.



- 4) Put the coaster (T) assembly into the rail of mechanical chassis by using the mode selector II (Ref No. J-18).

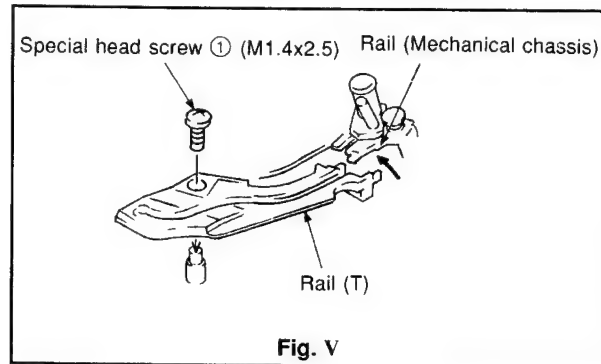
Note: Press the mode selector's button by instalments adjusting the direction of the coaster (T) assembly.

Mode display: **[S. OFF]** — **[STOP—RVS]**



- 5) Attach the rail (T) to the rail of mechanical chassis and GL gear shaft with a screw ① in order.

Fixing torque: 0.0588 N · m (0.6 kg · cm)



- 6) Attach the TG5 preset base (Ref No. J-13) and adjust the azimuth and height of the TG5 guide.

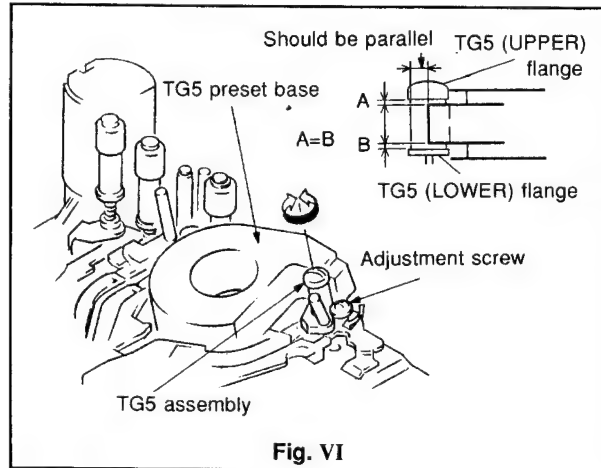
- Azimuth adjustment

Turn the gate adjustment screw and adjust parallel to jigs.

- Height adjustment

Turn the TG5 assembly so that the space between the jig and the TG5 (upper) flange is equal to the space between the jig and the TG5 (lower) flange. (A=B)

- 7) Rotate the adjustment screw in a 60-degree arc counterclockwise.



- 8) Refer to 4-2. to adjust the tracking.
- 9) Refer to 3-1. to attach the drum assembly.
- 10) Refer to 3-9. to attach the capstan motor.
- 11) Refer to 3-22. to attach the gooseneck assembly and LS chassis block assembly.
- 12) Refer to 3-10. to attach the LED base assembly.
- 13) Refer to 1-1. to attach the cassette compartment assembly.

3-25. MODE CAM ASSEMBLY AND FP-245 FLEXIBLE BOARD

1. Removing

- 1) Refer to 1-1 to remove the cassette compartment assembly.
- 2) Refer to 3-10. to remove the LED base assembly.
- 3) Refer to 3-22. to remove the gooseneck assembly, LS chassis block assembly and reform arm assembly.
- 4) Set the **STOP-RVS** mode.
- 5) Remove the screw ① and keep away from the rail (S).
- 6) Remove a screw ② and two of screw ③, then remove the mode cam assembly and FP-245 flexible board.

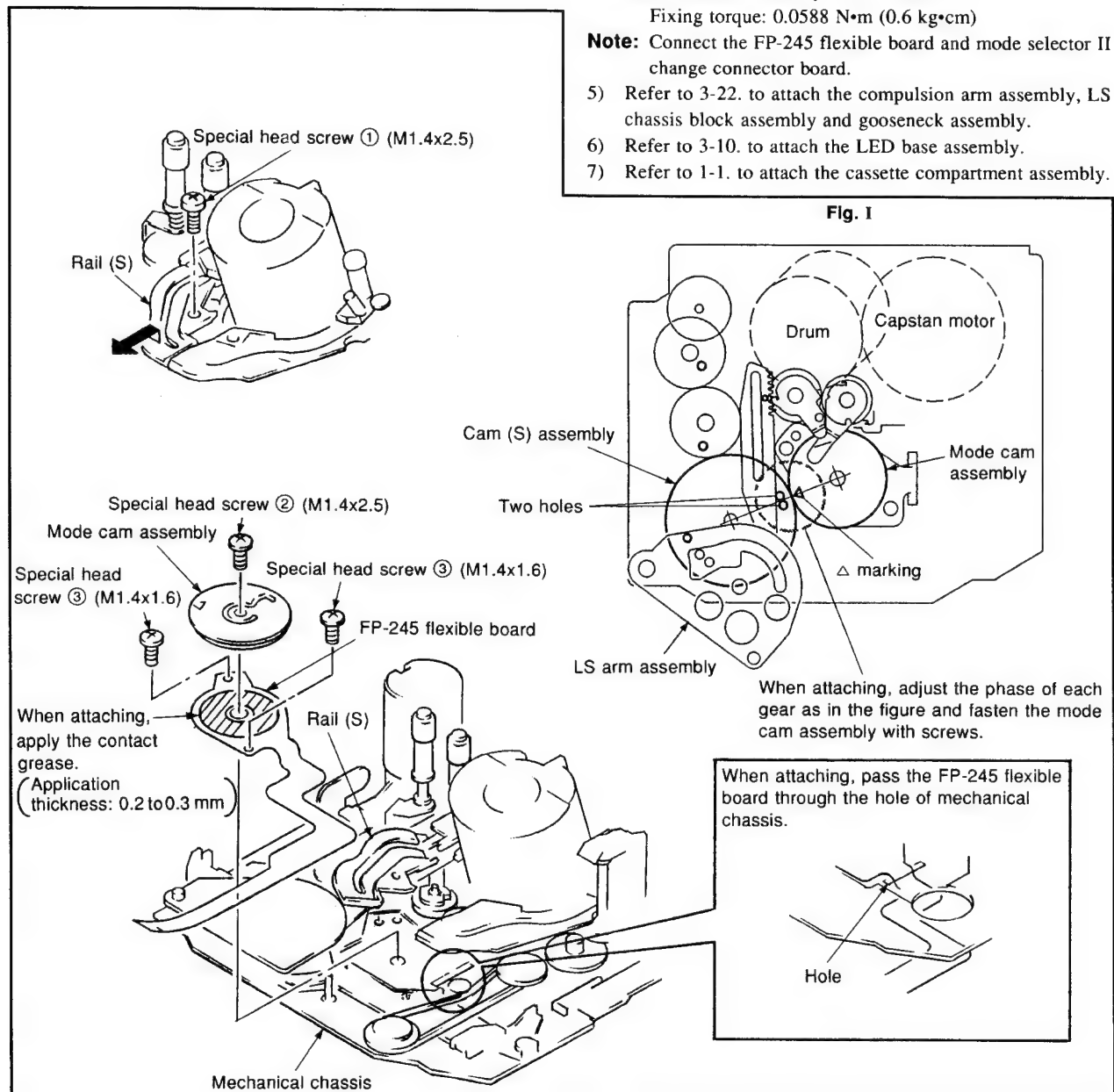
Note: Pay attention the FP-245 flexible board is connected to the mode selector II change connector board (Ref No. J-19).

2. Attaching

- 1) Attach the FP-245 flexible board with two of screw ③ and apply the contact grease to a pattern.
Fixing torque: 0.0981 N·m (1 kg·cm)
Thickness application of grease: 0.2 to 0.3 mm (A little overflow is no problem.)
- 2) Put the mode cam assembly on the fitting shaft. (Do not fasten with a screw.)
- 3) Attach the rail (S) with a screw ① and load by using the mode selector II as in the figure I. (Condition: the phase of each gear is matched. **S. OFF** mode.)
Fixing torque: 0.0588 N·m (0.6 kg·cm)
- 4) Pay attention to the phase with the cam (S) assembly. Fix the mode cam assembly with a screw ②.
Fixing torque: 0.0588 N·m (0.6 kg·cm)

Note: Connect the FP-245 flexible board and mode selector II change connector board.

- 5) Refer to 3-22. to attach the compulsion arm assembly, LS chassis block assembly and gooseneck assembly.
- 6) Refer to 3-10. to attach the LED base assembly.
- 7) Refer to 1-1. to attach the cassette compartment assembly.



3-26. LS ARM ASSEMBLY, EJ ARM AND CAM (S) ASSEMBLY

1. Removing

- 1) Refer to 1-1. to remove the cassette compartment assembly.
- 2) Refer to 3-1. to remove the drum assembly.
- 3) Refer to 3-10. to remove the LED base assembly.
- 4) Refer to 3-22 to remove the gooseneck assembly and LS chassis block assembly.
- 5) Refer to 3-23. to remove the GL (S) block assembly.
- 6) Set the **[S. OFF]** mode, remove the screw ①, then remove the LS arm assembly.
- 7) Remove in the order of tension spring and screw ② from the side of LS chassis, then remove the EJ arm and cam (S) assembly.

2. Attaching

- 1) Check the **[S. OFF]** mode and apply the grease (three positions, 1.5 mm dia.) to the mechanical chassis.

Grease: Floil Grease (SG-941)

Note: **[S. OFF]** mode is the condition that the phase of each gear is matched.

- 2) Apply the grease (○: two positions, 1.5 mm dia.) into a long hole of the cam (S) assembly, attach it with attention to the phase.

Grease: Floil Grease (SG-941)

- 3) Apply the grease (1.5 mm dia.) into a long hole of the EJ arm. Attach it with a screw ② and hook the tension spring.

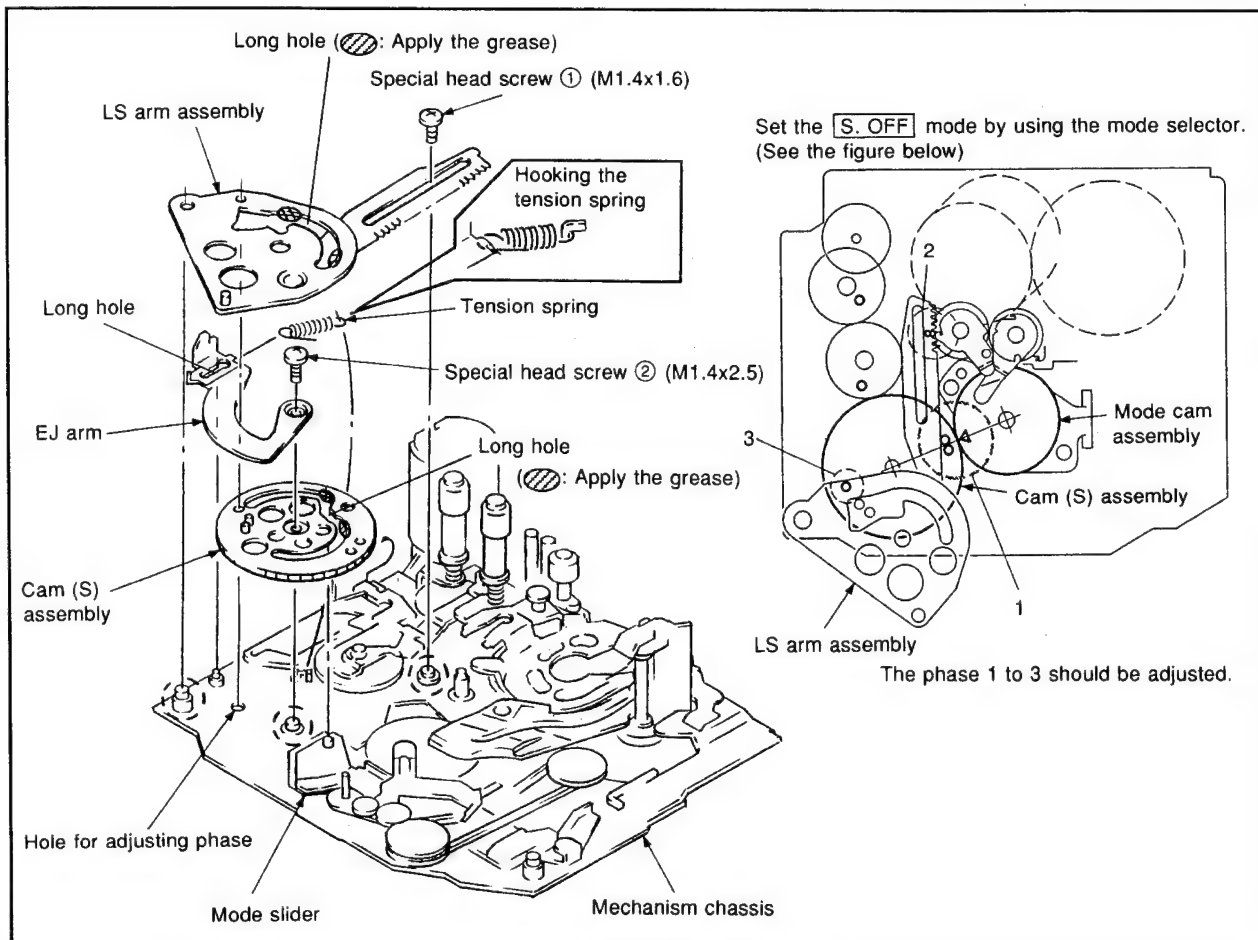
Fixing torque: 0.0981 N·m (1 kg·cm)

Note: There is a specified direction of the spring hook.

- 4) Apply the grease (two positions, 1.5 mm dia.) into a long hole of the LS arm assembly. Pay attention to the phase with the cam (S) assembly and mode slider, and attach with a screw ①.

Fixing torque: 0.0981 N·m (1 kg·cm)

- 5) Refer to 3-23 to attach the GL (S) block assembly.
- 6) Refer to 3-22. to attach the LS chassis block assembly and gooseneck assembly.
- 7) Refer to 3-10. to attach the LED base assembly.
- 8) Refer to 3-1. to attach the drum assembly.
- 9) Refer to 1-1. to attach the cassette compartment assembly.



3-27. ADJUSTMENT ARM ASSEMBLY, RELAY BELT, RELAY PULLEY ASSEMBLY AND CONVERSION PULLEY ASSEMBLY

1. Removing

- 1) Refer to 1-1. to remove the cassette compartment assembly.
- 2) Refer to 3-10. to remove the LED base assembly.
- 3) Refer to 3-22. to remove the gooseneck assembly, LS chassis block assembly and reform arm assembly.
- 4) Remove in the order of tension spring and a screw from the side of mechanical chassis, then remove the adjustment arm assembly.

Note: Remove the spring from the rear of mechanical chassis.

- 5) Remove the relay belt and washers, then remove the relay pulley assembly and conversion pulley assembly.

2. Attaching

- 1) Hook the tension spring to the side of LS chassis, then fix temporarily the adjustment arm assembly at the position in the figure I.

Note: There is a specified direction of the spring hook.

- 2) Apply one quarter drop oil to the shaft A and B each. (part Oil: NT68)

- 3) Attach the relay pulley assembly and conversion pulley assembly with each washer, then hook the relay belt. (Pay attention to a torsion in a belt).

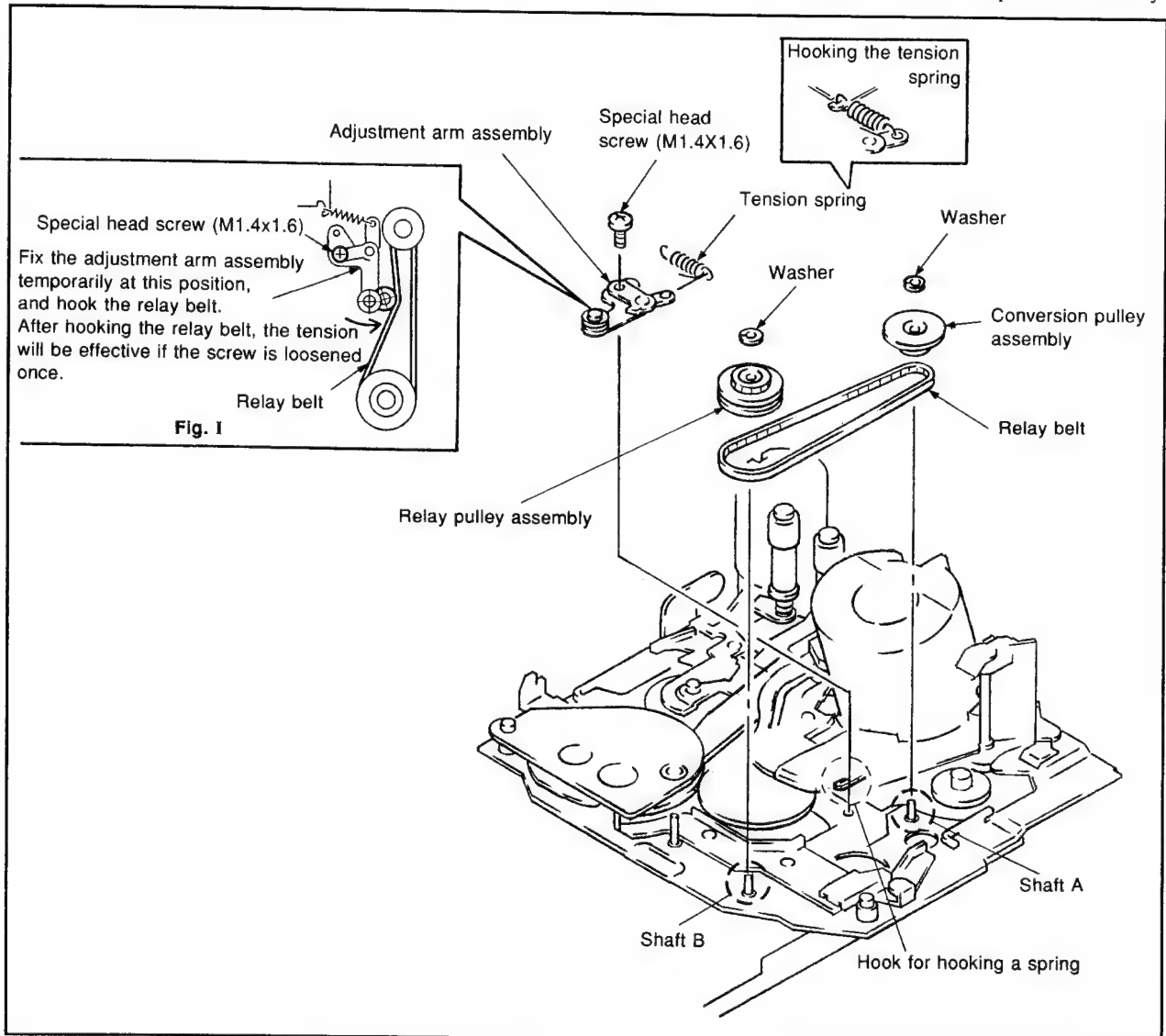
- 4) Loosen the screw, check a tension to the relay belt, and fasten the screw tightly. (Refer to the figure I.)

Fixing torque: $0.0981 \text{ N} \cdot \text{m}$ (1 kg \cdot cm)

- 5) Refer to 3-22. to attach the compulsion arm assembly, LS chassis block assembly and gooseneck assembly.

- 6) Refer to 3-10. to attach the LED base assembly.

- 7) Refer to 1-1. to attach the cassette compartment assembly.




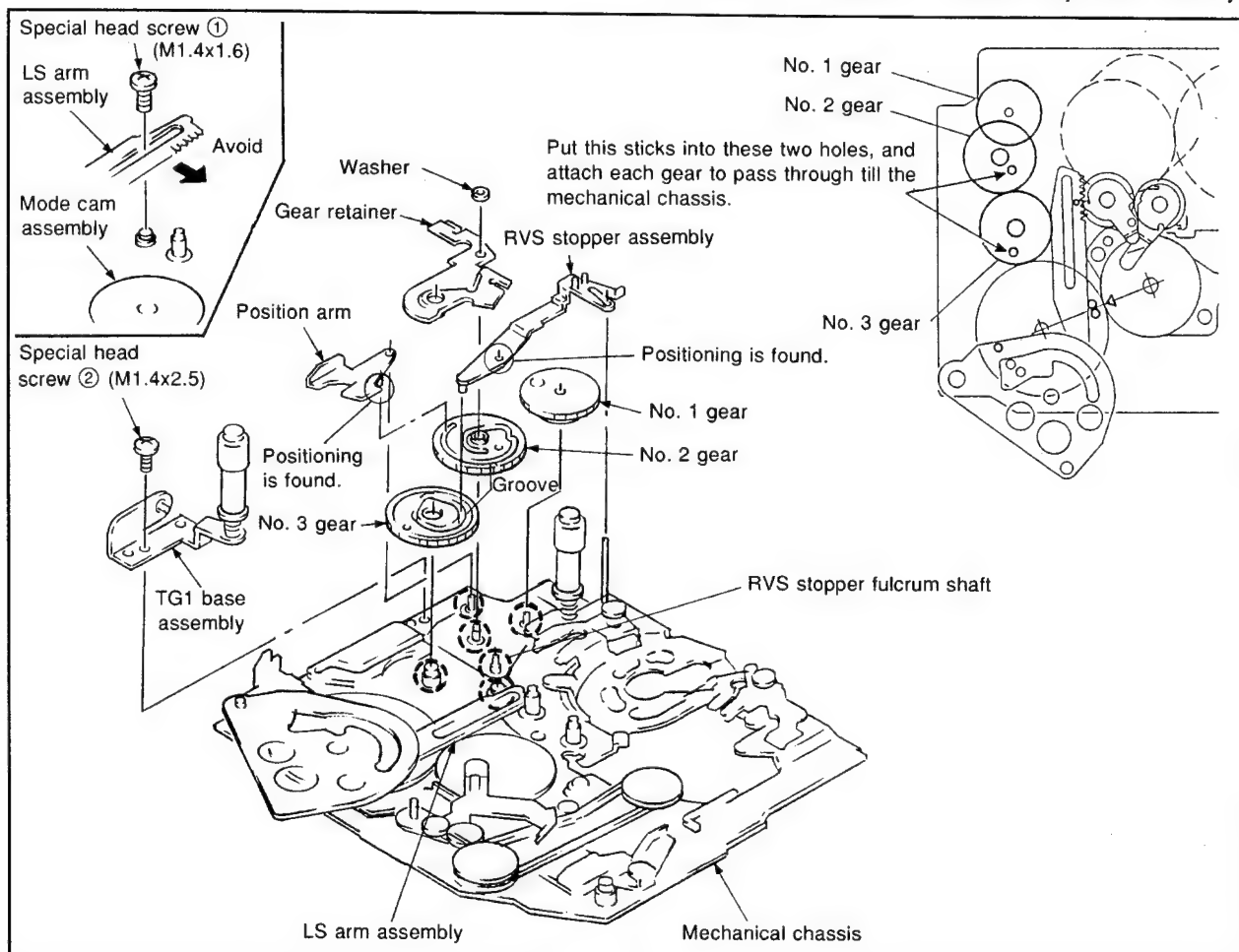
3-28. GEAR RETAINER, POSITION ARM, RVS STOPPER ASSEMBLY AND GEAR NO.1, 2 AND 3

1. Removing

- 1) Refer to 1-1. to remove the cassette compartment assembly.
- 2) Refer to 3-1. to remove the drum assembly.
- 3) Refer to 3-2. to remove the HC assembly.
- 4) Refer to 3-10. to remove the LED base assembly.
- 5) Refer to 3-22. to remove the gooseneck assembly and LS chassis block assembly.
- 6) Refer to 3-23. to remove the GL (S) block assembly.
- 7) Refer to 3-8. to remove the LM motor.
- 8) Remove the screw ① and keep away from the LS arm assembly.
- 9) Remove the washer and remove the gear retainer, position arm and RVS stopper assembly.
- 10) Remove the screw ② and remove the TG1 base assembly.
- 11) Remove each gear of No. 1, 2, and 3.

2. Attaching (Refer to "3-30. EACH GEAR PHASE ADJUSTMENT" for detail.)

- 1) Apply the grease (1.5 mm dia.) to six positions of  part and each gear of No. 1, 2 and 3.
- 2) Attach in the order of No. 3, 2 and 1 with attention to the phase. (As for gear of No. 1, phase adjusting is not needed.)
- 3) Attach the TG1 base assembly with a screw ②.
- 4) Apply the grease to the groove of gears No. 2 and 3.
Grease: Floil Grease (SG-941)
- 5) Attach in the order of RVS stopper assembly (The position adjustment is needed. RVS stopper fulcrum shaft), position arm (Adjust the pin and the groove of No. 2 gear.) and gear retainer with a washer.
- 6) Attach the LS arm assembly with a screw ①.
Fixing torque: 0.0981 N · m (1 kg · cm)
- 7) Refer to 3-8. to attach the LM motor assembly.
- 8) Refer to 3-23. to attach the GL (S) block assembly.
- 9) Refer to 3-22. to attach the LS chassis block assembly and gooseneck assembly.
- 10) Refer to 3-10. to attach the LED base assembly.
- 11) Refer to 3-2. to attach the HC assembly.
- 12) Refer to 1-1. to attach the cassette compartment assembly.



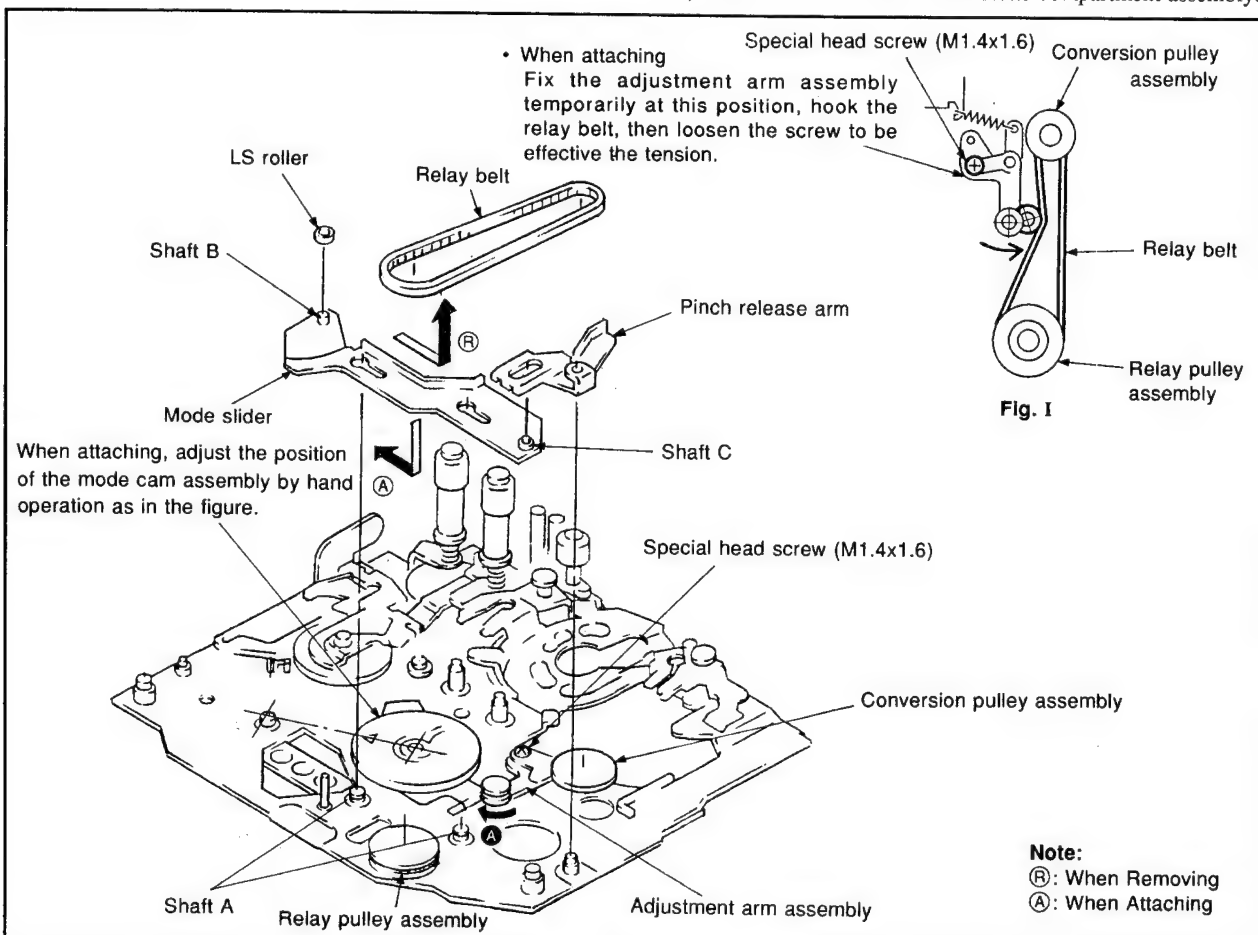
3-29. MODE SLIDER

1. Removing

- 1) Refer to 1-1. to remove the cassette compartment assembly.
- 2) Refer to 3-1. to remove the drum assembly.
- 3) Refer to 3-10. to remove the LED base assembly.
- 4) Refer to 3-22. to remove the gooseneck assembly, LS chassis block assembly, compulsion arm assembly and pinch release arm.
- 5) Refer to 3-23. and 3-24. to remove the each GL (S) and (T) block assembly.
- 6) Refer to 3-25. to remove the LS arm assembly, EJ arm and cam (S) assembly.
- 7) Loosen a screw, slide the adjustment arm assembly in the direction of arrow (fixed at the position in the figure I) **(A)**, and remove the relay belt.
- 8) Remove the mode slider in the direction of arrow. (Pay attention to lose a of LS roller.)

2. Attaching

- 1) Apply the grease (1.5 mm dia.) to the shaft A and attach the mode slider in the direction of arrow.
Grease: Floil Grease (SG-941)
 - 2) Apply the grease (1.5 mm dia.) to each shaft B and C, and attach the LS roller to the shaft B.
Grease: Floil Grease (SG-941)
 - 3) After the relay belt is attached, loosen the screw, check a tension to the relay belt, and fasten the screw tightly. (Refer to the figure I.)
Fixing torque: 0.0981 N • m (1 kg • cm)
 - 4) Adjust the phase of each gear of No. 2 and 3 and the mode cam assembly by using the mode selector II. (Refer to 3-30.)
- Note:** The mode cam assembly should be manual operated.
- 5) Refer to 3-26. to attach the cam (S) assembly, EJ arm and LS arm assembly.
 - 6) Refer to 3-23. and 3-24. to attach the GL (S) and (T) block assembly.
 - 7) Refer to 3-22. to attach the release arm, compulsion arm assembly, LS chassis block assembly and gooseneck assembly.
 - 8) Refer to 3-10. to attach the LED base assembly.
 - 9) Refer to 3-1. to attach the drum assembly.
 - 10) Refer to 1-1. to attach the cassette compartment assembly.



3-30. EACH GEAR AND MODE CAM ASSEMBLY PHASE ADJUSTMENT

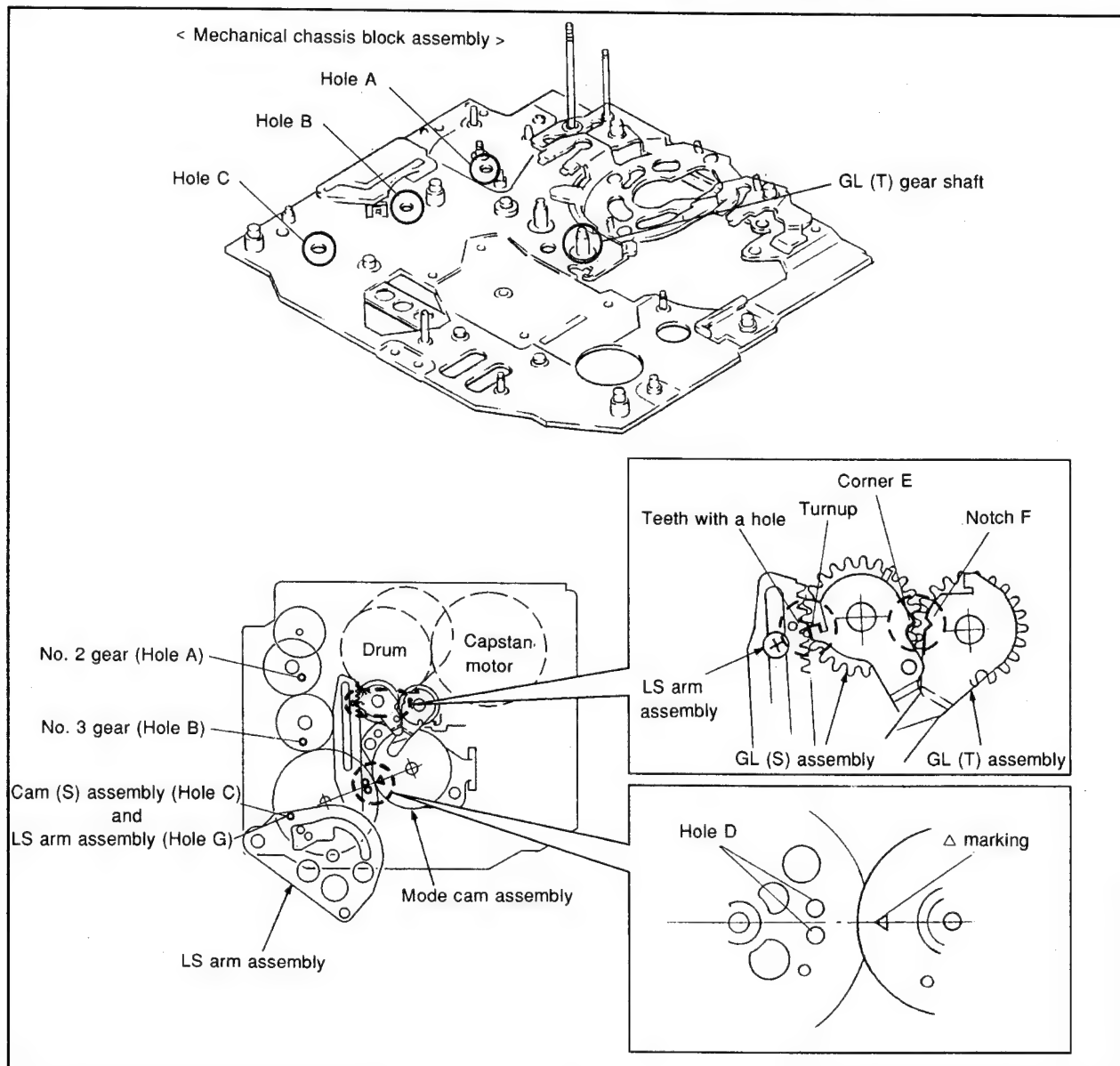
In case the phase of mode cam assembly and its related gears does not match, so that the normal operation is not performed due to replacement or removal of parts needed to adjust the phase, adjust the phase of each parts as below.

• Phase adjusting

- 1) Set each hole A of gear No. 2, B of gear No. 3 and C of cam (S) assembly to the holes A, B and C on the mechanical chassis in layers.
- 2) Set the position of the Δ mark on the mode cam assembly between two of holes D on the cam (S) assembly.
- 3) Attach the GL (T) assembly to the GL (T) gear shaft.
- 4) Set the position of the notch F and the corner E on the GL (S) assembly to the GL (T) assembly.
- 5) Set the hole G on the LS arm assembly to the hole C on the cam (S) assembly in layers. Also set the position of the teeth with a hole of the LS arm assembly and the turn-up of the GL (S) assembly at the same time.
- 6) After adjusting all phase, check the **[S. OFF]** mode by using the mode selector II (Ref No. J-18).

Note 1: The **[S. OFF]** mode is the condition that all phase are matched.

Note 2: As for attaching each gear and mode cam assembly, refer to attaching for each.



4. TAPE PATH ADJUSTMENT

4-1. PREPARATION FOR ADJUSTMENT

- 1) Refer to 2-2. to clean the tape running surface (tape guide, drum, capstan and pinch roller).
- 2) Connect the adjustment remote commander (Ref No. J-17) to the remote terminal of the set and turn the HOLD switch on.
- 3) Select the data of page: 3 and address: 3C, then set data: 07. (Note 1)
- 4) Connect the oscilloscope (Note 2). (Note 1)
 Channel 1—RS-63/64 board CN775 ① pin (Note 3)
 External trigger—RS-63/64 board CN775 ⑥ pin
 Trigger scope— +

Note 1: Refer to each service manual due to difference between each model. The case of DCR-VX700/VX1000 series is mentioned here.

Note 2: Connect the oscilloscope through the multi CP jig 2 (J-6082-140-A) or CPC jig (J-6082-311-A).

Note 3: Connect CN775 ① and ② pin (GND) at 75Ω resistance.

- 5) Playback a tracking tape (XH2-1) (Ref No. J-5).
- 6) Check that the RF waveform is flat at the entrance and exit of the oscilloscope. (See the figure I-**A**) If the RF waveform is not flat at the entrance and exit (See the figure I-**B**, **C**), adjust according to the adjustment from 4-2.
- 7) After adjusting and check satisfied with step 6), reset the data which was set in step 3) by using the adjustment remote commander. (Note 1)
 1. Select the data of page: 3 and address: 3C, then set the data: 00.
 2. Remove the power supply.

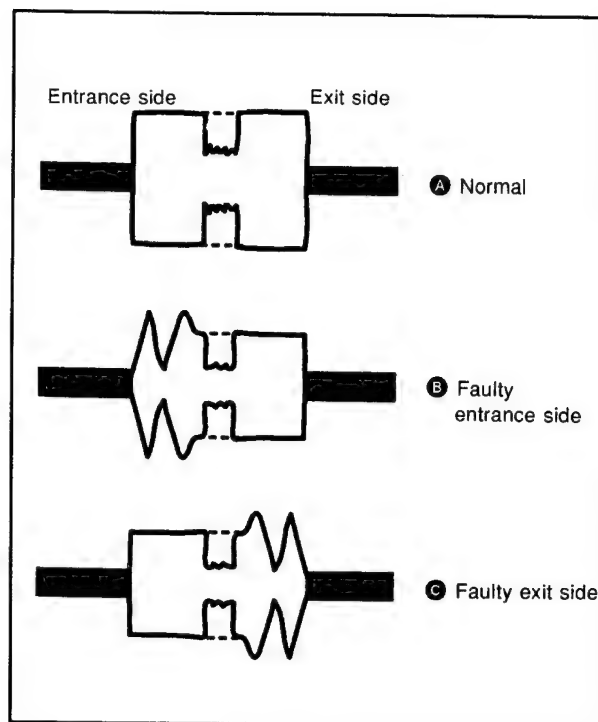
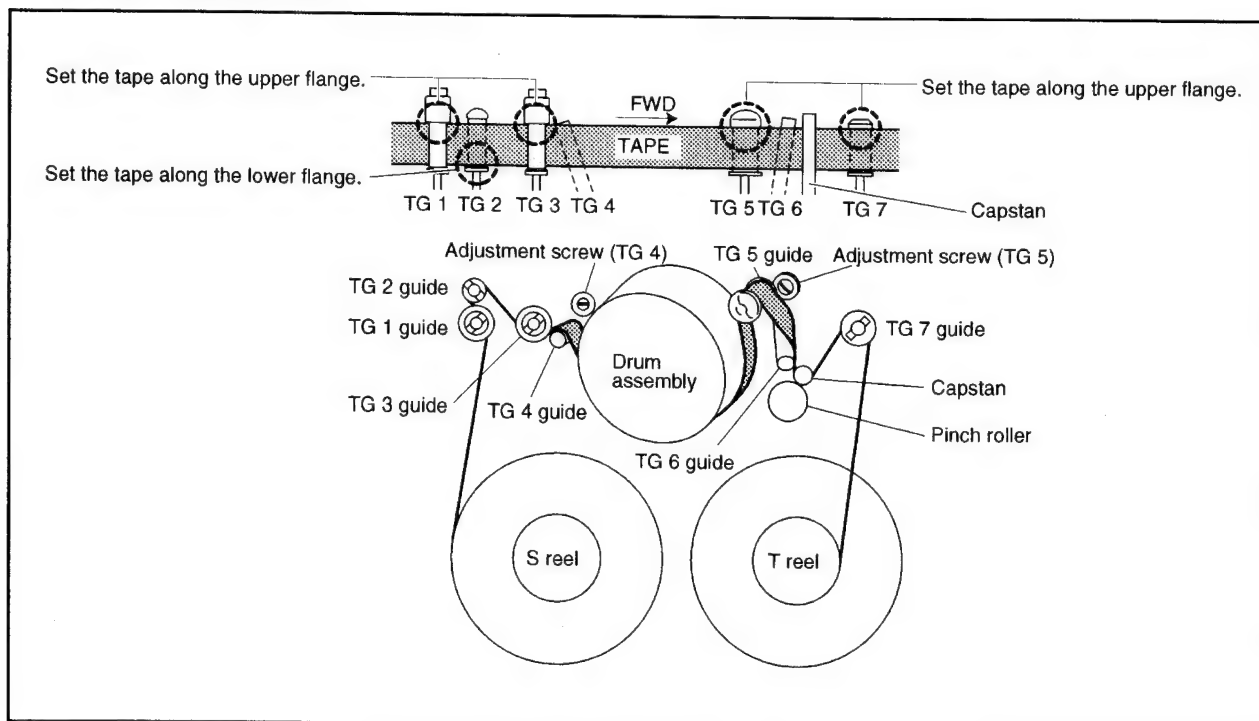


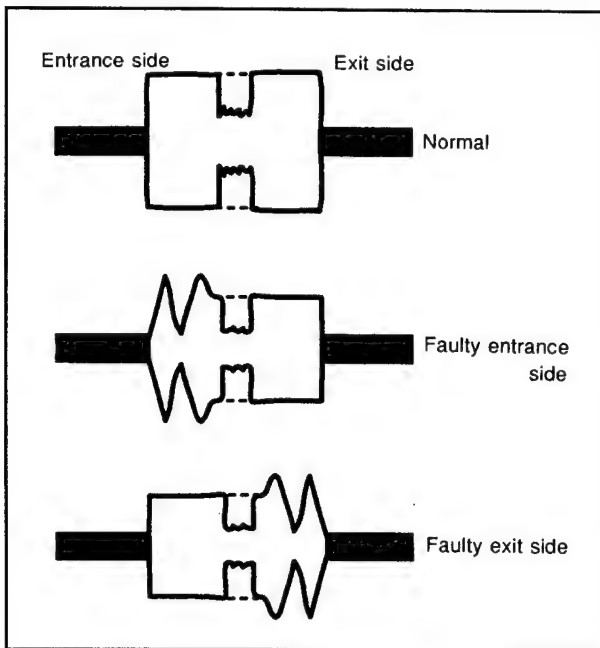
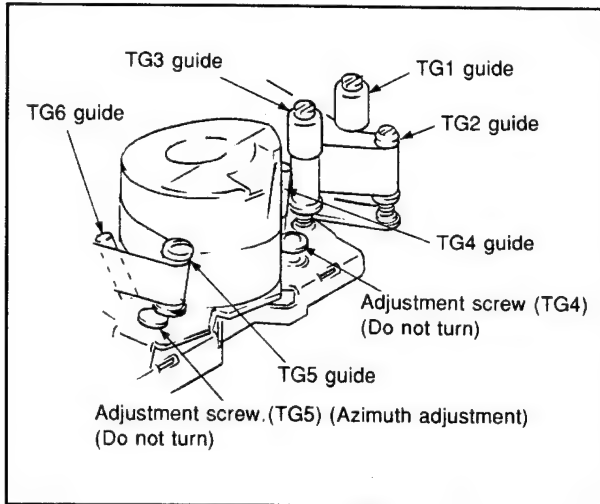
Fig. I



4-2. TRACKING ADJUSTMENT

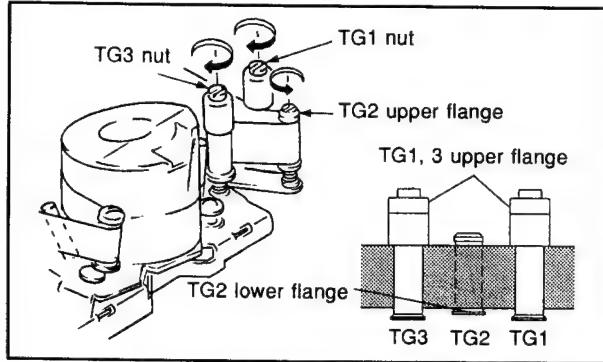
- 1) Playback the tracking tape (XH2-1) (Ref No. J-5).
- 2) Turn the TG3 guide so that the waveform is flat at the entrance.
- 3) Turn the TG5 guide so that the waveform is flat at the exit.

Note: Do not loosen the gate adjusting screw of TG4 and TG5.



4-3. TG1, TG2 AND TG3 GUIDE ADJUSTMENT

- 1) Playback the tracking tape (XH2-1) (Ref No. J-5).
- 2) Be sure the tape is parallel with the upper flange of TG1 and TG3 during FWD running, and check the tape is parallel with the lower flange of TG2 as well. In case there is a space between each flange and the tape, rotate the TG3 nut clockwise to be parallel with each flange as for TG1 and TG3, rotate the upper flange counterclockwise to be parallel with the lower flange as for TG2.



Confirm no change of the tracking waveform. If the tracking waveform at the entrance describes a downward curve as shown in the figure II, raise the height of TG2 lower flange to adjust the tracking at the entrance.

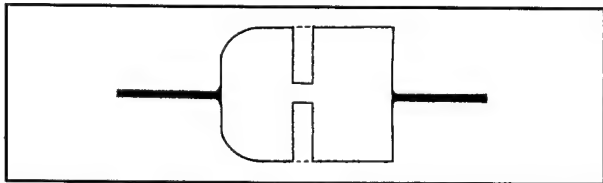
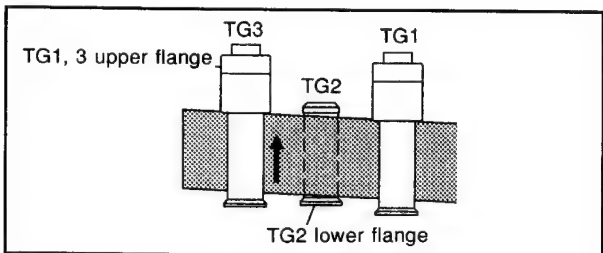


Fig. II

After adjusting the tracking at the entrance, set the RVS mode. If the tape is curled at the lower flange of TG2 guide, rotate the TG2 upper flange clockwise to correct the curl. Rotate the TG3 nut in a 180-degree arc counterclockwise, and check raising tape.



4-4. TG7 GUIDE ADJUSTMENT

- 1) In the playback mode, check that the tape is not slack between the capstan and TG7 guide.
Specification: 0.5 mm or less
If the tape is slack, rotate the TG7 guide and adjust to correct the slack.
- 2) Set the REV and check the RF waveform at the exit. (See Fig. III)
- 3) If the waveform is unsatisfactory, rotate the TG7 upper flange in a 90-degree arc counterclockwise and check the step 1) and 2) again.
- 4) Apply the screw lock (Ref No. J-20) to the part of screw on TG7 guide.

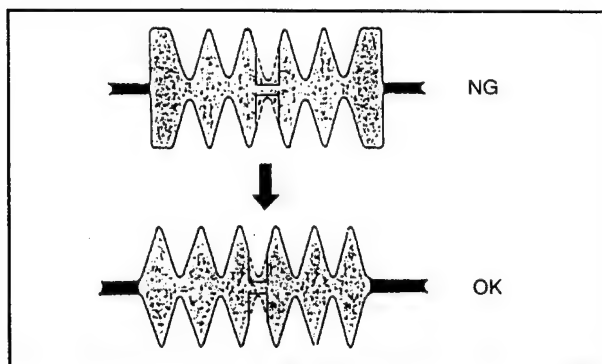
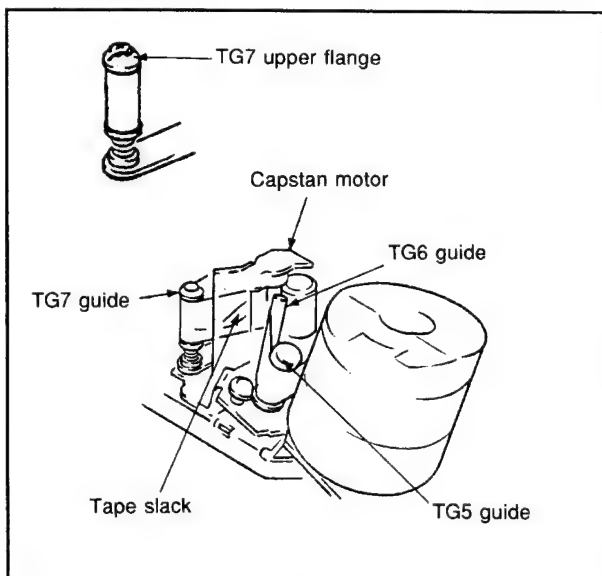


Fig. III

4-5. CHECKS AFTER ADJUSTMENTS

1. Tracking check

- 1) Playback the tracking tape (XH2-1) (Ref No. J-5). (See Fig. IV)
- 2) When the waveform's amplitude of CUE (or REV) is (A=100%), check the amplitude of RF waveform becomes approx. 0.65A (65%) during playback.

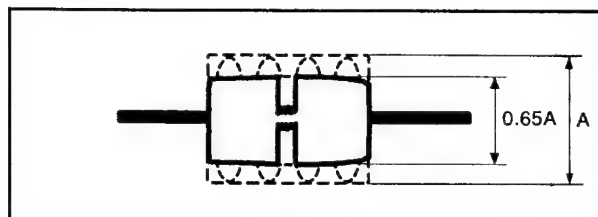


Fig. IV

- 3) When the waveform's amplitude of CUE (or REV) is (A=100%), check the difference between the minimum amplitude (Emin) and the maximum amplitude (Emax) for FWD is 30% or less. (See Fig. V)

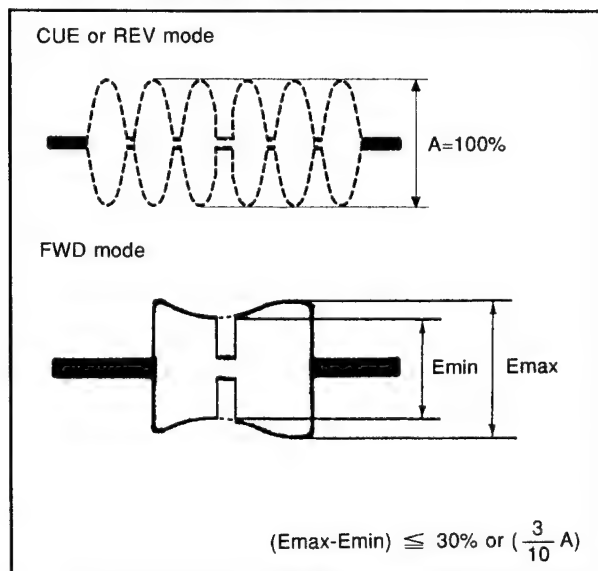


Fig. V

- 4) Check the waveform does not fluctuate badly. (See Fig. VI)

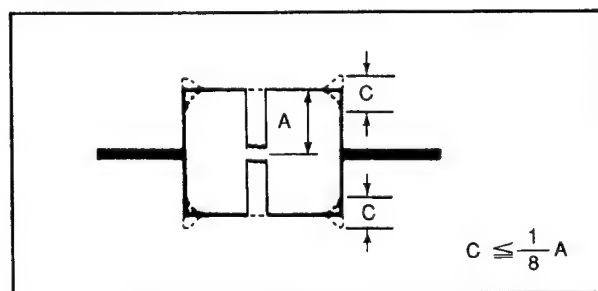


Fig. VI

2. CUE AND REV CHECKS

- 1) Playback the tracking tape (XH2-1) (Ref No. J-5) and set the REV. The peak pitches of the waveform at this time must be uniform. (See Fig. VII)
If not uniform, carry out "4-2. TRACKING ADJUSTMENT" and "4-4. TG7 GUIDE ADJUSTMENT".
- 2) Set the CUE. The peak pitches of the waveform at this time must be uniform. (See Fig. VII)
If not uniform, carry out "4-2. TRACKING ADJUSTMENT".

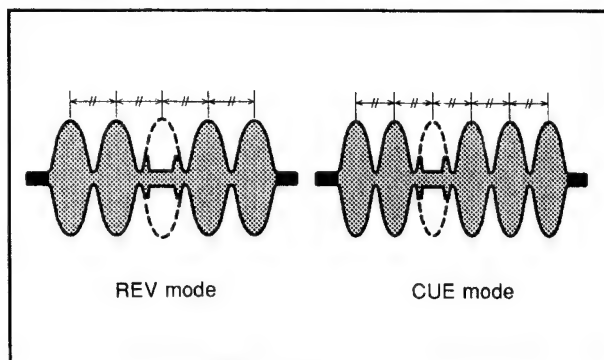
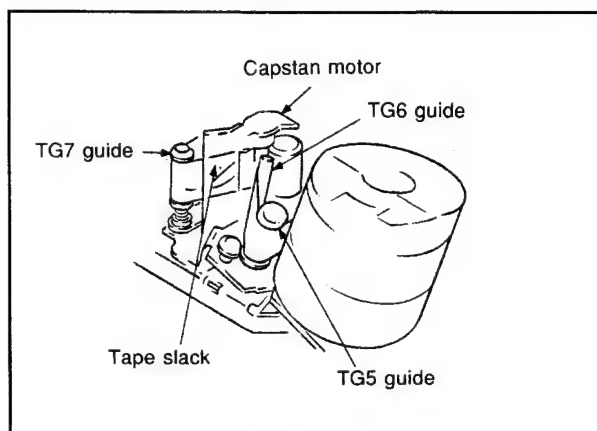


Fig. VII

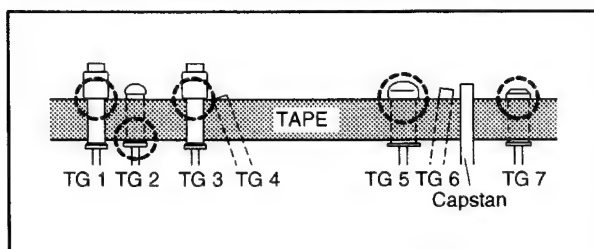
3. RISING CHECK

- 1) Playback the tracking tape (XH2-1) (Ref No. J-5).
- 2) Set the PLAYBACK mode, and check the RF waveform rises horizontally within one second. Also check the tape around the pinch roller is not slack.
- 3) Playback the tape after CUE/REV and FF/REW, and check the RF waveform rises horizontally within one second.
- 4) Repeat the checks at steps 2) and 3).

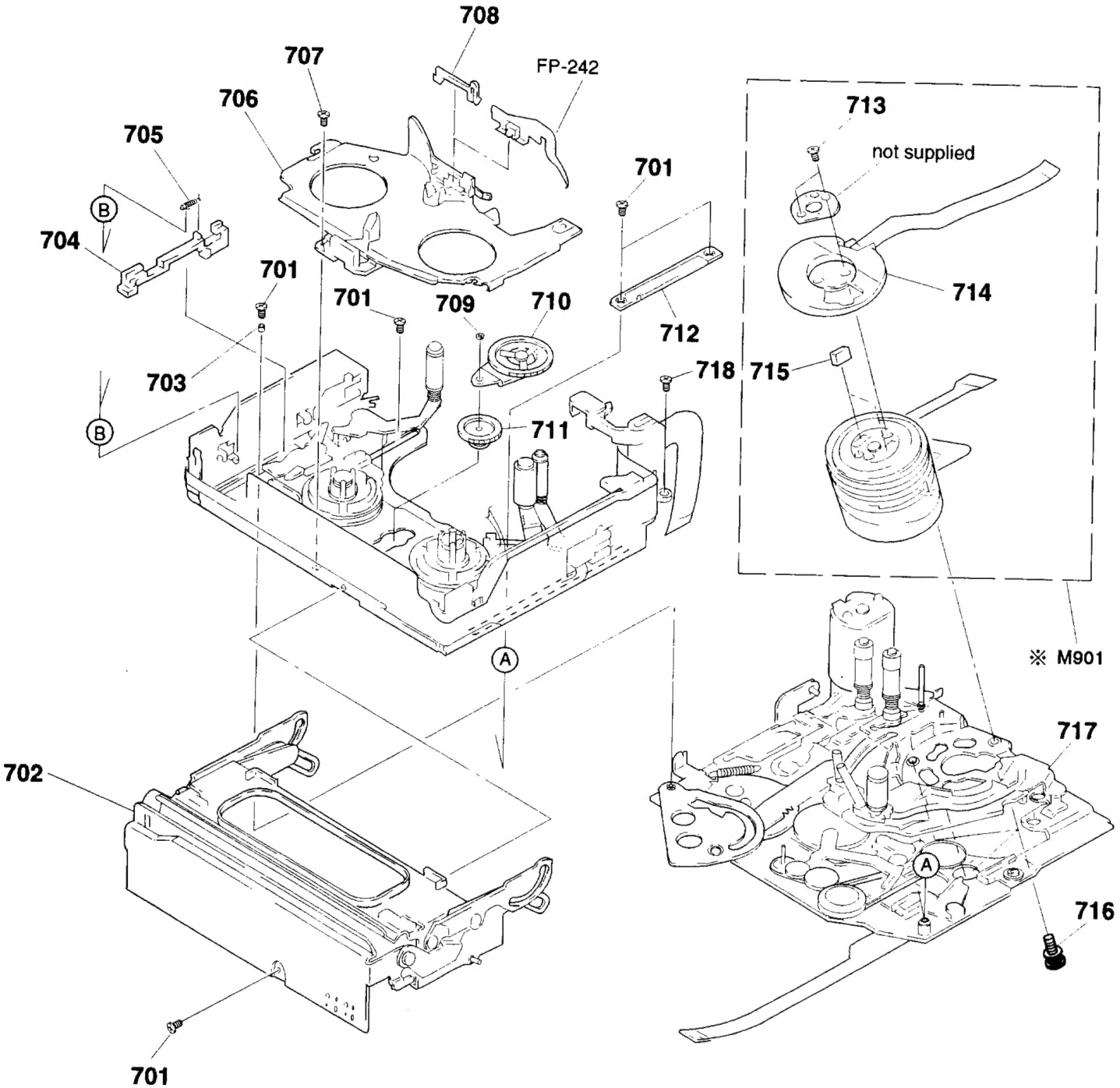


4. TAPE PATH CHECK

Check that the tape is not curled badly on each TG1 upper flange, TG2 lower flange, TG3 upper flange, TG5 upper flange and TG7 upper flange in the setting of CUE and REV.



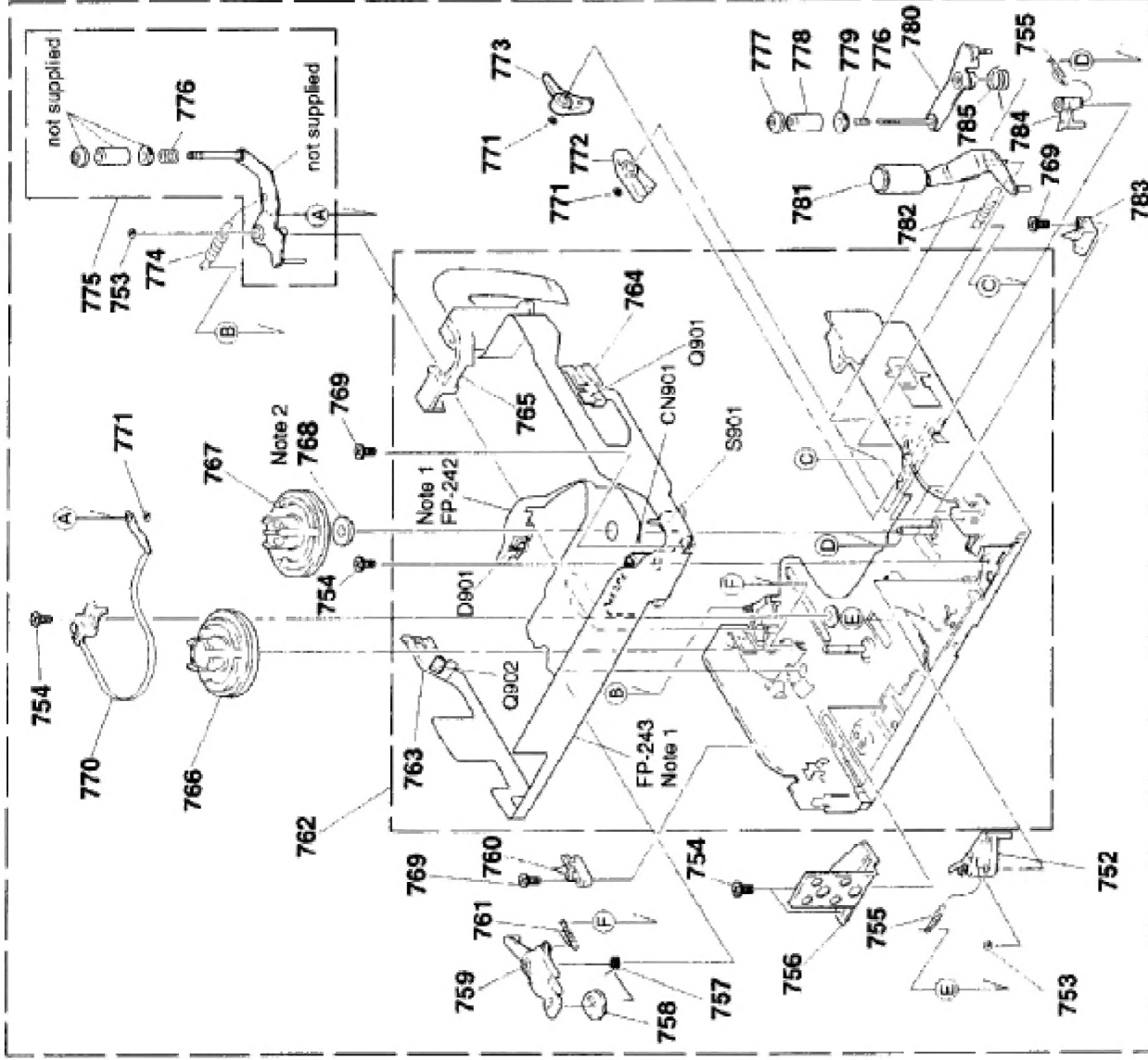
CASSETTE COMPARTMENT AND DRUM ASSEMBLIES



LS CHASSIS ASSEMBLY

Note 1: About FP-242 and FP-243

The FP-242 and FP-243 flexible boards are installed to a chassis with a hot press, which are included in the Ref. No. 762 LS chassis (S) assembly. They are not supplied separately because the high precision for installation is needed.

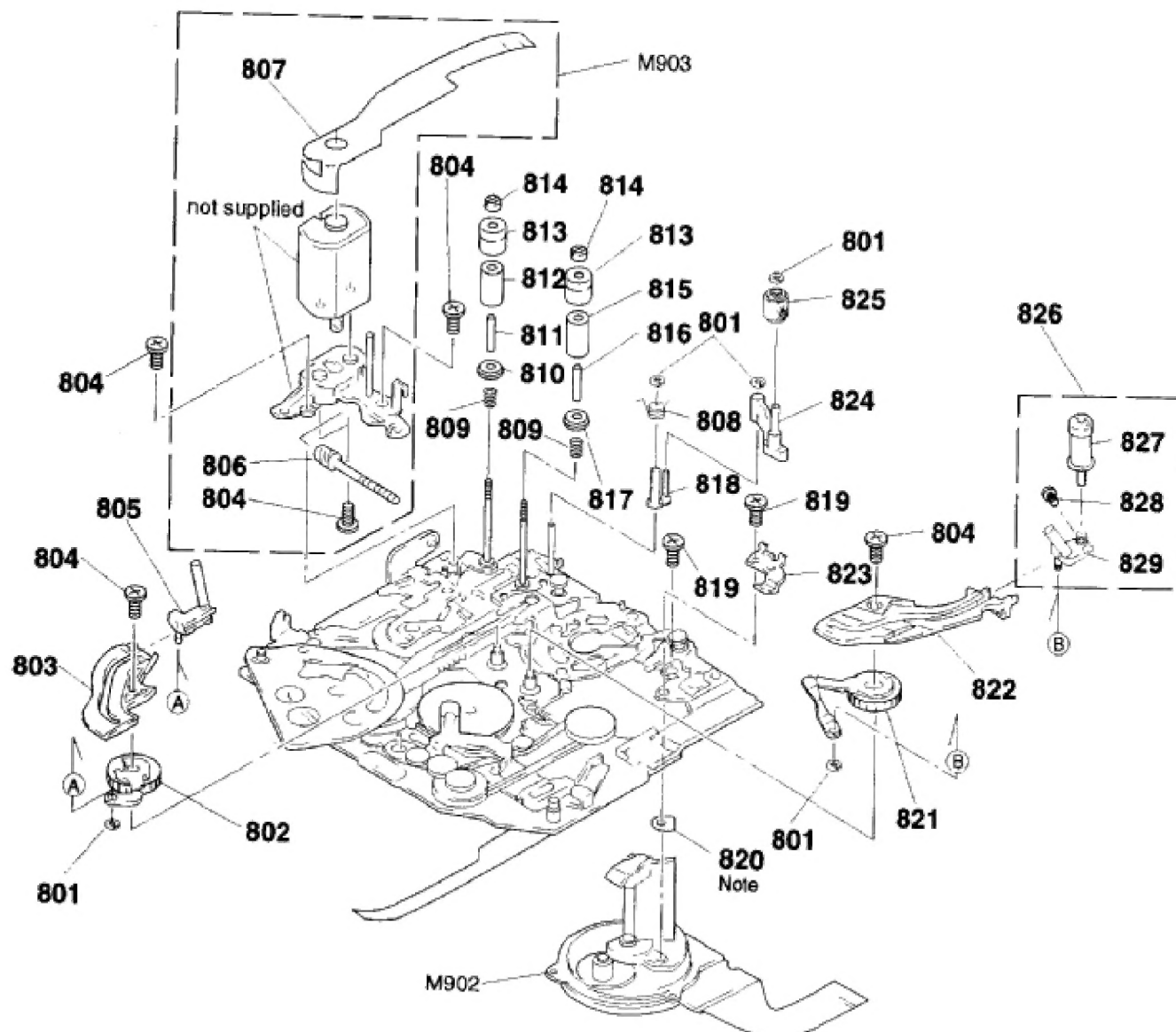


Note 2: Selecting the T washer

Select proper parts for the Ref. No. 768 T washer according to "3-21. Height adjustment for each reel table" on page 23.

MECHANISM CHASSIS ASSEMBLY (1)

Note: Be sure to remember the installed position (one of two positions), direction and thickness of the Ref. No. 820 (head spacer) when the M902 (capstan motor) is removed. Refer to "3-9. Capstan motor" on page 15 for details. The thickness of head spacer is normally 100 μm . If it is lost, two 50 μm head spacers will be needed. Be careful not to loose it.



MECHANISM CHASSIS ASSEMBLY (2)

